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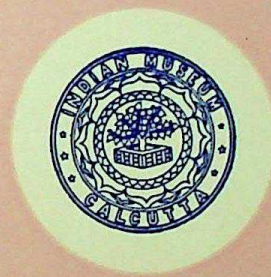
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# INDIAN MUSEUM BULLETIN

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# INDIAN MUSEUM BULLETIN

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# CONTENTS

	<i>Pages</i>
Editorial Note .. .. .	5
The Vikrama and Śaka Eras—Observations on their beginnings and their early use in Eastern India: Dr. B. N. Mukherjee .. .. .	7
A Note on Vaishnavite Āyudhapuruṣas in Mediaeval Kashmiri Sculptures: Sri Bansilal Malla .. .. .	28
A Fresh Appraisal of Bharhut: Dr. R. C. Sharma .. .. .	32
Eras and System of Dating in Early and Mediaeval Records of Orissa: Snigdha Tripathy .. .. .	38
A Note on the Tumain Inscription of Kumāragupta I, G.E. 116: Sri Ranabir Chakravarti & Sri Gopal Chandra Sinha .. .. .	46
Anthropology in the Museums of India during the British Period: Dr. Sabita Ranjan Sarkar .. .. .	49
R. D. Banerjee and his Contribution to the Study of Indian Iconography: Dr. Samir Kumar Mukherjee .. .. .	60
Evidence of Sunderban Buffalo <i>Bubalus Bubalis</i> Linnaeus, from Canning, West Bengal—Feebly indicative of a Sacrifice: Sri Manomay Ghosh .. .. .	64
Cultural Zones in Lower Palaeolithic West Bengal: Dr. Asok Datta .. .. .	69
Gupta Coins: Their Social Bearing: Dr. (Miss) Chhanda Mukherjee .. .. .	78
Re-assessment of a Sculpture Showing Buddha's Life Scenes: Smt. Anasua Sengupta .. .. .	80
A Report on the Conservation Treatment of Bharhut Sculpture: Dr. R. K. Mukhopadhyay & Dr. A. B. Mitra .. .. .	82
A Note on Some Interesting Icons from Nalanda: Sri Partha Pratim Bose .. .. .	85







## EDITORIAL NOTE

The 20th issue of the Indian Museum Bulletin is before the readers. Like the previous numbers it contains significant articles on different aspects of Indology including pre-history, inscriptions, iconographic interpretations and fresh appraisal of early art. It also discusses the role of museums in the study of Anthropology.

Last year the Indian Museum organised a special lecture series and exhibition on the birth centenary of late Sri R. D. Banerjee, the discoverer of Mohenjodaro who was also associated with this Museum for some years. One paper highlights his contribution to the study of Indian Iconography.

We deeply mourn the death of Dr. Salim Ali, an internationally renowned authority on the study of birds. He was at the panel of Visitors to the Indian Museum for long. The world of Zoology has lost a precious jewel in his passing away.







# THE VIKRAMA AND ŚAKA ERAS—OBSERVATIONS ON THEIR BEGINNINGS AND THEIR EARLY USE IN EASTERN INDIA

B. N. MUKHERJEE

## A

TWO of the most well-known and widely used Indian eras are those called after Vikrama and Śaka<sup>1</sup>. Traditionally a year of the Śaka Era begins in Chaitra and each of its month is *amānta* (*i.e.* ending on the 15th day of the dark fortnight) in the South and *pūrṇimānta* (*i.e.* ending on the 15th day of the bright fortnight) in the North. The reckoning as adopted by the Government of India also commences with Chaitra 1 corresponding to March 22. On the other hand, a year of the Vikrama Era commences in Kārttika and has *amānta* months in the South and starts in Chaitra and has *pūrṇimānta* months in the North. However, there are indications that up to the mediaeval times the years of this reckoning used to commence in Kārttika also in North India<sup>2</sup>. In some areas of Rajasthan and Gujarat the year is counted from Āshāḍha śudi 1 (*i.e.* 1st day of the bright fortnight of Āshāḍha), while in the Udaipur region of Rajasthan it is reckoned from Śrāvaṇa-badi 1 (*i.e.* 1st day of the dark fortnight of Śrāvaṇa).<sup>3</sup>

The years of the Vikrama and the Śaka Eras are generally counted as “past” years. But initially the years of both the reckonings might have been counted as “current” years. According to Al-Bīrūnī, the Śakakāla commenced 135 years after the beginning of the Vikramāditya-kāla.<sup>4</sup> This claim is supported by the *Kālakāchārya-Kathānaka*<sup>5</sup> and some epigraphic records including the one from Bikaner dated in Vikrama-samvat 1645 and Śaka-varsha 1510.<sup>6</sup> The Veraval inscription of Chālukya-Vāghelā Arjuna is dated in Āshāḍha-badi 13 of *inter alia* Vikrama (-samvat) 1320 and Rasūla Mahammada-samvat (*i.e.* Hijri year) 662.<sup>7</sup> Since Hijri 662 commenced in November of A.D. 1263, the 13th day of the dark fortnight of the month of Āshāḍha of the Vikrama-samvat 1320 fell in June or July, A.D. 1264.<sup>7a</sup> Hence Kārttikādi-Vikrama year 1320 corresponded to A.D. 1263-64. This would fix the first “past” year, “first” current year and the “o” year of the Vikrama Era in 57-56 B.C., 58-57 B.C. and 59-58 B.C. respectively (accepting the year 1320 as a “past” one). Hence the era commenced in 58 B.C. (probably in the month of Kārttika). Since the Śaka Era began after the lapse of 135 years of the Vikrama Era, its first Chaitrādi year started in A.D. 78 (probably in March) and its first “current” year was in A.D. 78-79, first “past” year in A.D. 79-80 and the “o” year in A.D. 77-78.

Though the years of commencement of the Vikrama and Śaka Eras are now universally accepted as 58 B.C. and A.D. 78, scholars are not unanimous about the identity of the founder of each of them. We have also no clear idea about the period and direction of the early use of these eras in the eastern part of the Indian subcontinent (Bihar, Orissa, West Bengal, Bangladesh, Tripura, Assam and other north-eastern states). We propose to discuss these two points in this paper.



## B

It is noteworthy that though the Navsari inscription of the Vikrama year 1131 explicitly claims the reckoning as having been “produced” (*utpādita*) by Vikramāditya, no record before the 8th century associates with it the name Vikrama. Even after an epigraph from Dhiniki (Gujarat) called a year (794) of the reckoning as a Vikrama-samvatsara, a few documents called it as the Mālava Era,<sup>7b</sup> by which name it was popularly known (in about the area of Rajasthan) from at least the early 5th to the second quarter of the 6th century and even in the early 8th century A.D.<sup>8</sup> According to the evidence of the Mandasor inscription of the 461 and the Nagari epigraph of the year 481, the Era of the Mālavas had been known as *Kṛta*.<sup>9</sup> Records expressly dated in the years 282, 295, 428 and 480 of the Kṛta Era are known from Nandsa, Badva, Bijayagarh and Mandasor.<sup>10</sup> Apparently the Mālavas used the Kṛta Era so extensively that it came to be known after their name. One epigraph pointedly refers to the “reckoning of the Mālava gaṇa which has been eulogised by the name Kṛta”. The presence of the Mālavas in Rajasthan in the late 1st century A.D. or early 2nd century A.D., and so from a time prior to the earliest datable use of the Kṛta Era in that region, is suggested by a Nasik inscription of Usavadāta indicating some activities of the Malayas (=Mālavas) near Pokshara or Pushkara in the Ajmer area.<sup>11</sup> The Malayas or Mālavas have been identified with the Malloi whom Alexander met perhaps near the confluence of the Indus and Akesines (Chenab or really, in this case, the Panjnad) in the 4th century B.C.<sup>12</sup> Hence the Mālavas, a people of the north-west, migrated to Rajasthan by about the 1st century A.D.

## C

In the light of these well-known facts and inferences we can judge the evidence of some recently noticed Kharostī (or Kharoshṭī)<sup>13</sup> epigraphs, discussed mainly by H. W. Bailey, G. Fussman and the present writer.<sup>14</sup>

One of these epigraphs, engraved on a steatite casket, is dated in the year twentyfive and also “in the year sixtythree—20 (+\*) 20 (+\*) 20 (+\*) 1 (+\*) 1 (+\*) 1 of Maharaja Aya deceased, on the sixteenth day of the month of Kārttika” (*Samvatsara'e treshathima'e 20 (+\*) 20 (+\*) 20 (+\*) 1 (+\*) 1 (+\*) 1 Maharajasa Ayasa atidasa Kaṭi'asa masasa divasa'e shodasha'e*).<sup>15</sup> The opening section of the second inscription, engraved on a slab of stone, can be translated as “on the day 3 of the month of Āsvayuj (*i.e.* Āśvina) (*of*) the year seventy-four—20 (+\*) 20 (+\*) 20 (+\*) 10 (+\*) 4—of the Great King the Great Aya of completed (former) time” (*samvatsaraya choduśatitima'e 20 (+\*) 20 (+\*) 20 (+\*) 10 (+) 4 Maharajasa Mahatasa Ayasa vurtakalisa Aśpa'i'asa masasa di(va)samimim 1 (1\*) 1 (+\*) 1*).<sup>16</sup> The date portion of the third record, inscribed on a steatite casket, can be translated as “in the seventy-seventh year of the Great King Aya of completed (*i.e.* past) time on the twentyfourth—20 (+\*) 4—day of the month of Śrāvaṇa” [*savatsaraye salaśatitimaye Maharajasa Ayasa vurtakalasa Śravanasa masasa di'asaye chatuviśaye 20 (+\*)*<sup>17</sup> 4]. Another document, engraved on the outer face of the lid and the base of a steatite relic casket, commences with the expression “on the fifth—4 (+\*) 1—day of the month of Āshāḍha in the year eightythree of Maharaja Aya of completed (former) time” [*samvatsara'e treaśiti maharajasa Ayasa vurtakalasa Ashadhasa masasa divasaye pañchamaye 4 (+\*) 1*].<sup>18</sup> The sixth relevant record, inscribed on four sides of a stone reliquary, seems to have been issued “on the twentythird day of the month of Āshāḍha in the year one hundred twentysix of Mahārāja the Great Aya of the past time” (*savatsaraye shaviśavashaśatima'e maharajasa mahamitasa Ayasa kalagadasa Ashadhasa masasa divasami treviśami*).<sup>19</sup>

The years described as “of the Great king Aya deceased”, “of the Great king the Great Aya of the completed (*i.e.* past) time”, “of the Great king Aya of the completed (*i.e.* past) time” and “of the Great King the Great Aya of the past time” should mean that the years concerned belonged to a system of counting which had begun in the reign of Aya, who was no more on the dates of the records in question. Thus the years concerned were years of an era called after a ruler called Aya. So there is now no doubt,



as it has already been established,<sup>20</sup> that one of the eras used in the Kharoshṭī inscriptions of the north-western part of the Indian subcontinent was named after Aya. The expression *sa* 136 *Ayasa* of the Taxila inscription of the year 136 and the expression *samvalsaraye* 134 *Ajasa* of the Kalawan record of the year 134 apparently allude to the era of Aya (or Aja, the name of the latter being a variant of that of Aya).<sup>21</sup>

Numismatic data have already been furnished for the historicity of two kings called Aya or Aja or Azes in the north-western part of the Indian subcontinent.<sup>22</sup> According to it, Azes I had for some time a (junior) co-ruler in Azilises and the latter had Azes II as his (junior) co-ruler for some time.<sup>23</sup>

Numismatic evidence appears to suggest that Azes II had for some time in his administration a subordinate ruler called Itravarman, who was a son of Vijayamitra and an Apracha-*raja*<sup>24</sup> (i.e. *Apracha-~~raja~~* < *Apratyag-rāja*, "king without any adversary", or *Apacha-~~raja~~*, "king of Apacha or Avacha").<sup>25</sup> Itravarman, according to the first epigraph under discussion, was a *Kumāra* (prince) and the son of an Apracha-*raja* (i.e. Vijayamitra) when he re-established some relics of the Lord Śākyamuni (i.e. Śākyamuni Buddha) and caused the excavation of a cistern in the year 25 as well as in the year 63 of the Great King Aya "deceased".<sup>26</sup> Obviously Itravarman became Apracha-*raja* under Azes II sometime in or after that year. So Azes II was alive in the year 63 of the dead king Aya and could not possibly have been the same as the latter ruler. Hence the reckoning must have started during the reign of the first king of the name of Azes.

The fixation of the first year of the Azes Era in terms of the Christian Era depends on the probable period of the rule of Azes II and of Itravarman, who was a prince in the year 63 of the reckoning in question.

Itravarman had a son called Aśpavarman. The latter struck copper "tetradrachms" (equestrian king holding a whip: Pallas) bearing the name of Azes (II) in the Greek legend on the obverse. The reverse legend in Kharoshṭī refers to him as the son of Itravarman and also a Stratega ("Commander of the troop") and Jayata ("Victorious").<sup>27</sup> Some other copper coins (equestrian king holding a whip: Zeus) have a Greek legend (not fully legible) and the symbol of Gondophares I on the obverse. The reverse inscription in Kharoshṭī refers to Aśpavarman as the son of Indravarman (or Itravarman), and also as Stratega, Jayata and Tratarā ("Saviour").<sup>28</sup> So Aśpavarman served under Azes II and also under Gondophares I, who was the immediate successor of Azes II in the north-western part of the Indian subcontinent.<sup>29</sup>

We have shown elsewhere that a coin-type of Gondophares I seems to have its prototype in the reverse device of a class of coins of the Imperial Parthian monarch Artabanus III (displaying a male figure sitting on horse back and having Tyche standing in front of him).<sup>30</sup> This type of Artabanus appears only on his coins dated in the year 338 (of the Seleucid Era), i.e. A.D. 27/28.<sup>31</sup> Hence at least a part of the rule of Gondophares I must be placed in or after A.D. 27-28. And since there is no reason either to ascribe an unusually long period of rule to Gondophares I or to believe that the coin-type of Artabanus III under discussion remained in circulation long after the end of his reign in c. A.D. 38 or 40,<sup>32</sup> the rule of Gondophares I in the north-western area of the Indian subcontinent should be placed in about the second quarter of the 1st century A.D.

Itravarman was obviously an adult prince, prior to the rule of Gondophares I in the north-west in about the second quarter of the 1st century A.D. On the other hand, as Itravarman and his son Aśpavarman served Azes II respectively as an Apracharaja and as a general prior to the advent of his immediate successor (Gondophares I) in the north-west in or about the second quarter of the 1st century A.D., the career of Itravarman as an adult prince need not be dated earlier than the first quarter of the 1st century A.D.



The above line of argument tends to attribute the years 25 and 63, both belonging to the period of Itravarman's existence as a prince, to the first quarter of the 1st century A.D. Hence the year 63 can be assigned to a system of counting which began in the second or third quarter of the 1st century B.C. The only known era, of which the year 1 can be assigned to the stipulated period, is the era of 58 B.C. Hence the year 63 may be referred to that reckoning. And since the year 63 belonged, as shown above, to the era of Azes (I), the latter might have been the same as the era of 58 B.C.<sup>33</sup>

The Mālavas, as noted above, certainly used the latter reckoning in and near the area of Rajasthan after migrating to that territory from the north-west by about the late 1st or early 2nd century A.D. So they could well have been familiar with the Azes Era in the north-west during the 1st century of more of its existence. This inference also enhances the feasibility of the identification of the era of 58 B.C. with that of Azes I.

There are indications of the circumstances leading to the commencement of the Azes Era. The Shahdaur inscription is dated in the year 20 (+\*) 10 (+\*)? of Aya and so in a year (30 or any year up to 40)<sup>34</sup> low enough to be considered as a regnal year. This custom of counting dates according to the regnal years is betrayed by the reference to the year 25 (obviously a year of rule of somebody) in addition to the recording the date in terms of the Azes Era in the first of the documents under discussion. Hence there may have some special reason for the use of the Azes Era and this can be found in the system of conjoint rule of Azes I and Azilises. The first year of the rule of Azilises must have started sometime in the reign of Azes I. Apparently Azilises, who had already been a king for some time before the end of the reign of Azes I, allowed, for the sake of convenience, the continuation of the reckoning initiated in the days of Azes I and carried on when the latter inducted Azilises as a junior co-ruler or king (with full royal titles) in the administration of the kingdom. The same story of allowing the continuation of an established reckoning could have been repeated at the end of the reign of Azilises, when Azes II became the sole sovereign of his state. So the Azes Era evolved out of continuation of reckoning started by Azes I (probably from his first regnal year) even after he ceased to rule. The old custom of dating according to regnal years was still in use, at least occasionally, in the domain of the Azes group (as indicated by the evidence of the first of the records under review).

The Azes Era thus came into use out of the continuation of counting the "regnal" years of a king even after his death. Its years were as if the regnal years of a ruler of "past time", as indicated by such expressions as the year of "Aya the deceased", or "Aya of past-time" or "Aya of completed time", etc. The same idea of the currency of an era of an *atīta* or "past" king (cf. *Ayasa atīdasa*) is betrayed by the name *Kṛta*, meaning *inter alia* "the past tense",<sup>35</sup> accepted as an earlier appellation of the Vikrama Era.<sup>35a</sup> This interpretation of the name *Kṛta* makes it intelligible in the contexts of its use as well as clinches the identification of the reckoning denoted by it with the Azes Era.

It appears that the era of Azes (I) became known as *Kṛta*, meaning "past tense or time", in Rajasthan by the 3rd century A.D., as the reckoning of the Mālavas in and about Rajasthan by the early 5th century A.D., and finally as the Vikrama Era by about the early 8th century A.D. D. C. Sircar has ably demonstrated that with the passage of time the name of Chandragupta II Vikramāditya, one of the most famous personages in Indian history and tradition, became associated with the reckoning of 58 B.C.<sup>36</sup>

#### D

Unlike the era of 58 B.C., the reckoning of A.D. 78 has been explicitly associated with only one name, that of the Śakas. Among the earliest known instances of such openly confessed connection are those furnished by an inscription from Hisse-Borala (Akola district, Maharashtra), dated in the year 380 "of the Śakas" (*Śakānām*)<sup>37</sup> and by Śiṃha-Sūri's *Lokavibhāga*, completed in the twenty-second regnal year of



Simha-Varman, lord of Kāñchi, and also “in the year eighty in excess of three hundred” of the “Śaka-calling” (*Śak-āhvānam*).<sup>38</sup> (For the feasibility of having a still earlier example of association of the Śakas with the era of A.D. 78, see below section F.) In several inscriptions from the year 400 of its reckoning the relevant year is mentioned as *Śakanyā-kāla-atīta samvatsara*, meaning “the year of the past time of the Śaka king(s)” or “in the past year (*i.e.* in the completed year so and so) of the era of the Śaka king(s)”.<sup>39</sup> Ultimately the era became popularly known as Śaka-kāla, Śakābda, Śaka, etc.<sup>40</sup>

Of the years below the year 380 those on the coins of the group of the Western Kshatrapa ruler Chashtana must be referred to the era of A.D. 78, as it is done universally.<sup>41</sup> Only by doing so the last known date on the coins of the Western Kshatrapas (Year 31X, *i.e.* 310 or any year from 311 to 319) can be brought to the proximity of the earliest noticeable date on the silver coins struck by the Gupta monarch Chandragupta (II) after ousting the former rulers (*i.e.* year  $90+x$  of the Gupta Era, or  $90+A.D.$ ,  $319-20+x=A.D.$ ,  $409-10+x$  or any year from 91 to 96, the first known year of Kumaragupta I).<sup>42</sup>

Similarly the known dates of the Kosam inscriptions of the Maghas and related rulers of Kauśāmbī, which vary from the year 81 to 139, can be attributed only to the era of A.D. 78<sup>43</sup> and to no other known reckoning. Their attribution to the era of 58 B.C. would place the Maghas in an age too early for them (as they succeeded the Kushāṇas at Kauśāmbī) (see below). On the other hand, attribution of the relevant years to the era of A.D. 248-49 or to the Gupta Era of A.D. 319-20 would date them (or at least the year 139) much beyond the age of the Samudragupta, by whose time the Guptas occupied Kauśāmbī.<sup>44</sup> The Maghas themselves are nowhere indicated to have started their own reckoning. We have indeed no inscription of this family in the early years of a reckoning. Again, since at least eight kings ruled at Kosam between the year 81 (of the time of Bhadramagha) and the advent of Samudragupta<sup>44a</sup> by about the third quarter of the 4th century A.D. it will be difficult to place the said year after third quarter of the 2nd century A.D. Hence the initial year of the reckoning to which the year 81 belongs should not be placed after c. A.D. 100. This inference also tends to equate the reckoning employed by the Maghas with that of A.D. 78.

Thus the Maghas of the Kauśāmbī and some other areas and the early rulers of the group of Chashtana of Western and parts of Central India used the era of A.D. 78 simultaneously for some time in the last quarter of the first century and in the first half of its second century. But none of these two septs of rulers was in a position to influence or conquer the territory of the other. Hence in their use of the same era in a quite early period of its existence they must have been influenced by some superior power, which either had inaugurated or had been associated with it. The only conceivable imperial power which could have ruled or exerted influence in the areas in question in the age concerned and/or slightly earlier was that of the imperial Kushāṇas.<sup>45</sup>

An era was indeed started with the reign of the Kushāṇa king Kanishka, in which the years of the rule of his immediate successors as well as of himself were dated. This reckoning is known to scholars as the Kanishka Era. The same might well have been used by the above noted groups of rulers. This inference would tend to identify the Kanishka Era with the reckoning of A.D. 78.<sup>46</sup>

This inference is substantiated by the results of the archaeological excavations at Kosam (Kauśāmbī), according to which the supreme authority over that area passed from the hands of the Kushāṇas to those of the Maghas.<sup>47</sup> The rule of Kanishka I himself in this locality is proved by the finds of a royal seal and two epigraphs dated in the reign of Kanishka<sup>48</sup> and by the chance discovery of an inscription of Kanishka of the year 20 or 22.<sup>49</sup> So there is no doubt that when the Maghas succeeded the Kushāṇas at Kauśāmbī the Kanishka Era was already known there. So if the Maghas did not initiate a new reckoning, they must followed the one already current there, which was the Kanishka Era. So the Maghas must have adopted the Kanishka Era.<sup>50</sup> And if the Maghas, as it is now generally believed, followed the era of A.D. 78, it should be identified with the reckoning of Kanishka I.<sup>51</sup>



The known dates of Kanishka I (years 2-23) and his immediate successors like Vāsishka (years 20-28), Huvishka (years 26 or 25-60), Kanishka II (year 41) and Vāsudeva I (years 67-98) suggest the reason for the origin of the era concerned. The overlapping dates suggest the prevalence of the system of conjoint rule in the Kushāṇa empire. It appears that in the Kushāṇa empire the heir apparent often used to become a co-ruler of the senior ruler with full royal titles and status.<sup>53</sup> Hence Vāsishka, who had already been a king for at least three to four years at the end of Kanishka's reign, should have found it more convenient after becoming for some time the sole sovereign to continue the reckoning of Kanishka than to count afresh his regnal years.<sup>54</sup> The same may be said about his successors. So the Kanishka Era = Era of A.D. 78 probably grew out of the continuation of the regnal years of Kanishka I after his death.<sup>55</sup>

The continuity of the Kanishka Era in its second and even in the third century is suggested by *inter alia* the testimonies of the Kalivan inscription of Arya-Viśaghamitra of the year 108,<sup>56</sup> the Kosam epigraph of Vaiśravaṇa of the year 107,<sup>57</sup> the Kosam records of Bhīmavarman of the years 130 and 139<sup>58</sup> and a Mathura Buddha image inscription of the year 230.<sup>58a</sup>

No formal name was attached to the reckoning in these records. So was the case with the dates appearing on the coins and in several records of the group of Chashtana assignable surely to the era of A.D. 78. Later on the latter became associated with the name of the Śakas probably because it had been made popular in Western India and parts of Central India and the Deccan by the Śaka (or rather Śaka-Pahlava) rulers of the family of Chashtana.

## E

Available data about provenances of the records in the Vikrama Era or Śaka Era indicate the direction following which the use of each of these two reckonings was disseminated.

If the year 72, in which a Mathura inscription of Śoḍāsa is dated, can be attributed to the era of 58 B.C.,<sup>59</sup> this should be the earliest example of the use of this reckoning in the U.P. region. And if the era of 58 B.C. was the same as the Azes Era, the area concerned could have been familiar with it during the rule of Rājuvula, the father of Śoḍāsa, when he served as a Mahākshatrapa under Azilises.<sup>60</sup> In that case this reckoning began to be used outside north-west even during the period of the Azes dynasty. The continuity or revival of this reckoning in the Mathura area even during the late Kushāṇa age can be considered possible if the Mathura inscriptions of the years 270 and 299 are correctly attributed to the era of 58 B.C.<sup>61</sup>

Prevalence of the era of 58 B.C. in the Rajasthan region from the third century of its reckoning is well attested. As noted above, probably the Mālavas brought it to Rajasthan from the north-west (see above). From here the era (known locally as Mālava as well as Kṛta) spread to western India including Kathiawar. At Dhiniki in the Kathiawar area we have the earliest instance (or one of the very early instances) of calling the reckoning after Vikrama.<sup>62</sup>

Meanwhile the extension of the familiarity zone had gone up to the Bara Banki district of U.P. where at Haraha an inscription of the time of the Maukhari king Išānavarman was issued after the lapse of six hundred eleven *sarats* ("autumn", here meaning years).<sup>63</sup> The continuity and popularity of this reckoning in the U.P. region during the rule of the Gurjara-Pratihāras of Kanauj are proved by a number of records (of the 9th to 11th centuries A.D.) referring to it.<sup>64</sup>

The Vikrama Era might have been known in the Bihar area during the invasions by the Pratihāra kings like Nāgabhaṭa II, Bhoja and Mahendrapāla.<sup>65</sup> However, all of the epigraphs of Mahendrapāla from Bihar and the northern section of West Bengal and Bangladesh are dated in his regnal years and



not in the era of 58 B.C. This shows that perhaps up to the time of Mahendrapāla (A.D. 885-907/8) it was not popular in Bihar. No doubt, it has been claimed that the use of the era concerned in North Bihar in the 9th century and in the early 11th century A.D. may be indicated by the date vatsara 898, quoted in the *Nyāya-sūchī-nibandha* of Vāchaspati Misra of Mithilā, as the year of its composition, and by the date samvat 1076, mentioned in a manuscript of the *Rāmāyaṇa* as the year of its preparation in Tirabhukti (Tirhut).<sup>66</sup> However, as we shall see later, these dates, especially the second one, cannot be firmly attributed to the Vikrama Era. Nevertheless, the employment of this reckoning in North Bihar in the early 11th century A.D. is proved by *inter alia* by the two grants of the years 1077 and 1083 v.s. (=A.D. 1020 and 1026) issued by Sūryāditya of the Malayaketu family of Gorakhpur district of Eastern U.P. and the Champaran district of North Bihar.<sup>67</sup> In South-West Bihar the early instances of the employment of this system of dating are provided by *inter alia* the Silsila (near Bhabua in the Sahabad district) inscription of the time of Aṅgasīrṇha of the year 1162 (?) (=A.D. 1006),<sup>68</sup> the records of the Khayaravala tribe of the Sasaram and Palamau areas of the dates ranging from 1214 v.s. to 1225 v.s. (=A.D. 1158 to 1169), the Maner (Patna district) plates of the Gāhaḍavāla king Govindachandra of the year 1183 (A.D. 1126)<sup>70</sup> and the Gaya epigraph of the year 1232 (c. A.D. 1175).<sup>71</sup> In South-East Bihar the presence of the era is indicated by the Lar plates of Govindachandra issued from Mudgagiri or Monghyr in Vaiśākha of the year 1202 (=A.D. 1146).<sup>72</sup> The Gāhaḍavālas and their feudatories of the Khayaravala tribe<sup>73</sup> might have been to some extent responsible for making the reckoning well-known in South Bihar. There is enough evidence of the use of the Vikrama Era from the 13th century onwards. This reckoning was used even in some records referring to the reigns of Muslim rulers.<sup>74</sup>

There is no evidence of popularity of the Vikrama Era in further south, in Orissa,<sup>75</sup> or further east, in West Bengal, Bangladesh, Tripura, Assam, etc. in early and early mediaeval times. This reckoning, employed by two brothers of the Pāla king Mahipāla I in a record at Sarnath (U.P.),<sup>76</sup> was not used in the "Bengal" area itself during the Pāla age. Its occasional use in later centuries is perhaps suggested by a manuscript of the *Bodhicharyāvatāra* of Śāntideva, written in Bengali characters and copied in *Vikramāditya deva sam 1492* (i.e. in A.D. 1435-1436).<sup>76a</sup> The absence of regular employment of the reckoning is also indicated the Dharapat temple inscription of the Śaka year 1525 (A.D. 1603-04) where this date is mentioned as Śaka in the Vikrama Era.<sup>76b</sup> Obviously the author of the record did not know the implication of the Vikrama reckoning though had heard about it. Thus the Vikrama Era might have been only rarely utilised in "Bengal".

## F

Unlike the Vikrama Era, the era of A.D. 78 may be considered to have reached the Bihar area in early period of its use, if we identify it with the Kanishka Era. For an example we can refer to the Kalivan (Patna district) inscription of the year 108 (of the Kanishka Era).<sup>77</sup> Perhaps, as suggested by D. C. Sircar,<sup>78</sup> the use of this reckoning in Bihar was superseded by the era of the Imperial Guptas.

The Kanishka Era must have been prevalent in different parts of the vast Kushāṇa empire. There is hardly any doubt that this reckoning, identifiable with the era of A.D. 78, was employed by the Maghas (see above). But the Śaka or Śaka-Pahlava rulers of the family of Chashtana made the era of A.D. 78 really popular in Western India and parts of Central India and the upper western Deccan within a little more than the first three centuries of its use by referring to its years consistently on their coins and often in their records. As a result their ethnic name, popularly believed to be Śaka, became associated with the era.

The earliest instance of the association of the name Śaka with the era concerned may be furnished by the *Yavanajātaka* of Sphujidhvaja if the date of completion of its present versified (and perhaps expanded) version can be correctly referred to the reckoning of A.D. 78.<sup>79</sup> This date, *viz.*, the year 191,<sup>80</sup> indicates, when attributed to the era of A.D. 78, that the versified recension of the text was completed in A.D. 268-69



or (if the year 191 was an expired year) in A.D. 269-70. Chapter 79 of this treatise refers to *Samānām Śakānām* ("the years of the Śakas") and *Kālam Śakānām* ("the time of the Śakas").<sup>81</sup> These expressions, however, may refer only to the system of counting dates as followed by the Śakas, and do not necessarily mean the regular use of the name *Śakakāla* as an appellation of the reckoning in question.<sup>82</sup> Nevertheless its association with the name *Śaka*, alluding to the popular notion of the ethnic affiliation of Śaka-Pahlava Kshatrapas of Western India, should have begun at least in the academic circle by A.D. 269-70 if the versified form of the *Yavanajātaka* was actually completed in that year. In any case, the era of A.D. 78 became openly associated with the Śakas either during the rule of the "Śaka" Kshatrapa family in question or shortly after that and before the fading of the memory of strong connections between these rulers and the reckoning concerned.

After the era began to be called after the Śakas it spread towards the central and lower Deccan and perhaps in some areas immediately to its south. This hypothesis is borne out by the evidence of the inscription of the Śaka year 380 (A.D. 458) found at Hisse-Borala (Akola district in the Berar area of Maharashtra),<sup>83</sup> several epigraphs of the Chālukyas of Bādāmi (the earliest of which is dated in the Śaka year 465, i.e. 543)<sup>84</sup> and the *Lokavibhāga* of Simha-Sūri composed in the Śaka year 380 and also in the 22nd regnal year of king Simhavarman, Lord of Kāñchī<sup>84a</sup> (in Tamil Nadu).

Available data suggest the use of the Śaka reckoning in its 10th century in the Bastar district of M.P.<sup>85</sup> and Visakhapattanam and Srikakulam districts of Andhra, all bordering on Orissa.<sup>86</sup> The last two districts were controlled about this time by the Greater Gaṅgas of Kaliṅganagara (Mukhalingam in the Srikakulam district).<sup>87</sup> The year of coronation of Vajrahasta-Anantavarman is given as 960 of the Śakābda in the Narasipatan (Srikakulam district) plates of the Śaka year 967 and two other epigraphs.<sup>88</sup> The era was introduced in the lower part of Orissa during the reign of this Gaṅga ruler, as should be indicated by his Mandasa plates of the Śaka year 987 (A.D. 1065-66) and another grant of the Śaka year 991 (A.D. 1069-70) found in the Ganjam district.<sup>89</sup> The currency of the era was extended to upper coastal Orissa during the reign of Anantavarman Choḍagaṅga (A.D. 1078-1150), as suggested by the testimonies of some of his epigraphs including those at the Liṅgarāja temple of Bhuvaneswar dated in the year 1034, 1056 and 1063 Śakābda and the one at the Jagannath temple of Puri dated in the year 1054(?) of the same reckoning.<sup>90</sup>

The Sri-Kurman temple inscription of the Śaka year 1057 (A.D. 1135-36) refers to the extension of Choḍagaṅga's authority up to the Bhāgīrathī.<sup>91</sup> The Kendupatna plates speaks of the destruction of king of Mandāra's capital Āramaya (probably Arambag in the Hooghly district) by Choḍagaṅga and his fight on the Ganges.<sup>92</sup> A few Gaṅga epigraphs include the city of Midhunapura (Medinīpura or Midnapur in West Bengal) within his empire.<sup>93</sup> Though the Gaṅga authority over parts of the south-western section of West Bengal was shortlived, having ended for the time being perhaps with Vijayasena's success against Rāghava,<sup>94</sup> the son of Anantavarman, the system of dating in the Śaka Era could become known there in about this period.

No doubt, Śrīdhara, an inhabitant of Bhūriśreshṭhī (Bhursut) in Dakṣiṇa-Rāḍha (to be placed in southern section of West Bengal to the west of the Bhāgīrathī), composed his *Nyāyakandalī* in Śaka 913 (A.D. 991-992).<sup>95</sup> But, as it has already been pointed out, it might have been written in an area (outside his homeland) where the era of A.D. 78 had already become popular.<sup>96</sup> Even if this treatise was completed in Dakṣiṇa-Rāḍha in the late 10th century A.D. its erudite author's knowledge of the Śaka Era might have been derived from academic works, particularly on astronomy and astrology, referring to this reckoning and not from any popular custom in the region concerned.

More important for our purpose is the evidence of a manuscript of the *Kālachakrāvatāra* written in the proto-Bengali script and dated in Śaka 1047 (A.D. 1125-26).<sup>96a</sup> However, the proto-Bengali or rather



Gauḍī script could have been used in the 12th century A.D. also in the border regions outside the limits of "Bengal".<sup>96b</sup>

The first evidence of undoubted occurrence of the Śaka Era in a "Bengal" epigraph is furnished by a grant of a feudatory ruler called Ḍommanapāla or Maḍommanapāla, found in the islet of Rakhsaskhali near the mouth of the Hooghly in the West Sunderban area of South 24-Parganas in West Bengal. The grant issued from Dvārahaṭṭaka apparently within the limits of eastern Khāṭika (Khadi area to the east of the Hooghly channel) is dated on the first day of Vaiśākha of Śakābda 1118 (=A.D. 1196-97).<sup>97</sup> The lower portion of West Bengal could have been in direct contact with coastal Orissa (in Kāliṅga), where the Śaka Era had already been well established.

The era might have become fairly popular with the writers in "Bengal" from a period earlier than Śaka 1118 (A.D. 1195-96). Śrinivāsa, who was connected with the court of the Senas, wrote his *Gaṇita-chudāmaṇi* in Śaka 1091 (A.D. 1159-60).<sup>98</sup> The *Adbhūta-sāgara*, attributed to Vallālasena (but not really written by him) began to be composed in Śaka 1089 or 1090 (according to different mss.).<sup>99</sup> This text fixes the beginning or initial period of Vallāla's reign (*rājyādi*) in the Śaka year "*bhuja-vasu-daśa*, 1081",<sup>100</sup> the reading of which can be emended as "*bhu-vasu-daśa-1081*" or as "*bhuja-vasu-daśa-1082*" to make the words and the figures to denote the same year. The date of composition of the *Dānasāgara*, also attributed to Vallālasena, is stated in the text as Śaka 1091.<sup>101</sup> The *Sadukti-Karṇāmṛta* of Śrīdharadāsa, who was patronised by king Lakshmaṇasena, was compiled in Śaka 1127 and in the year *rasaikaviṃśa* (i.e. 21 + 6 = 27) or *rājyaikaviṃśa* (i.e. 21).<sup>102</sup>

Thus the Śaka Era was quite familiar to the academics patronised by the Senas. They originally hailed from Karṇāṭaka, where this era had been known from a much earlier age.<sup>103</sup> But, unlike the Gaṅgas, the Senas never dated their official records in the Śaka reckoning. Hence they cannot be considered to have officially introduced this era in "Bengal". On the other hand, the reckoning could have known in or near Rāḍha,<sup>104</sup> where was the initial kingdom of the Senas of "Bengal".<sup>105</sup> By A.D. 1135 and so during the reign of Vijayasena (A.D. 1096-1159) and of Anantavarman Choḍagaṅga (A.D. 1078-1150), the authority of the Gaṅgas, who regularly used the Śaka Era in addition to regnal years, was extended to regions which could be partly in Rāḍha (if the term was taken in its widest connotation).<sup>106</sup> Vijayasena, who could take action against the Gaṅgas of Kāliṅga ruled by Anantavarman's son Rāghava<sup>107</sup> only towards the end of his reign, had no grounds to object to the use of the era in his kingdom.

So the Śaka Era, introduced in "Bengal" via Orissa, gained some popularity in the Sena kingdom. Lakshmaṇasena lost the western division of his kingdom to the Muslim invaders by the time when Ikhtyar-ud-din Muhammad Bakhtyār Khaljī conquered Nūdiāh.<sup>108</sup> The conquest of the Gauḍa region (consisting of Rāḍha and parts of north "Bengal", though the name could have been politically extended to south-east Bihar in the phase of the Pala rule)<sup>109</sup> by Muhammad is commemorated by a class of gold coins struck in the name of Muhammad bin sam, his superior ruler.<sup>110</sup> These coins bear the legend *Gauḍa vijaye* in proto-Bengali characters and the date 19 Ramadan, (A.H.) 601,<sup>111</sup> which fell in the month of May, A.D. 1205.<sup>112</sup>

After this reverse the Senas continued to rule, as indicated by the *Tabaqāt-i-Nāsiri*, only in Bang, i.e. Vaṅga<sup>113</sup> (and perhaps also in Samataṭa to the east of Vaṅga). So, when Śrīdharadāsa completed his *Sadukti-Karṇāmṛta* during the reign of Lakshmaṇasena and on Phālguna 20 of the Śaka year 1127,<sup>114</sup> which fell in early March of 1206, the Sena kingdom had already been restricted to eastern "Bengal". Hence the use of the Śaka Era should have been extended to eastern "Bengal" by c. A.D. 1206.

The regular use of the Śaka Era in Eastern "Bengal" (now in Bangladesh) and particularly in Harikela (in south-eastern Bangladesh) in the 13th century A.D. is suggested by *inter alia* the evidence of the Mainamati inscription of Harikāladeva of the Śaka year 1141<sup>115</sup> and the Mehar, Sobharampur and



Chittagong copper plates of Damodaradeva of Śaka year 1156, Śaka year 1158 and Śaka year 1165 respectively.<sup>116</sup> The testimony of the coins of Danujamardanadeva dated in the Śaka years 1339 and 1340 and minted at Pāṇḍunagara (Pandua in the Malda district), Chāṭigrāma (Chittagong) and Suvarṇagrāma (Sonargaon near Dacca) and the evidence of the pieces of Mahendradeva dated in Śaka 1340 and 1341(?) and struck at first two of the three mint-towns of the former ruler indicate that the era is question was widely known in the early 15th century A.D. in Harikela Vaṅga and Gauḍa (including the Malda district).<sup>116a</sup> By the late 16th and early 17th century A.D. the Śaka Era was so popular in different parts of West and North "Bengal" (including a section now in Bangladesh) that its name began to be used to denote "any era or year". The earliest known evidence is furnished by the Gorkui (Dinajpur, Bangladesh) inscription referring to *Sāke* 920 *tāri(i)kha* 17 *Māgha*.<sup>117</sup> Palaeographically this record cannot be attributed to the 10th century of the Śaka Era, but can be easily referred to that century of the reckoning of the Hijra Era of A.D. 622. Hence here the word *Śaka* means simply "a year".<sup>118</sup> On the other hand, in a temple at Dharapat (Bankura district, West Bengal), dated in Śaka 1525 and in the varsha (year) 909 of Malla Mahipāla Śaka, the name *Śaka* is used to denote "an era" (even other than the Śaka Era).<sup>119</sup> Such types of data show that by the late 16th and early 17th century the Śaka Era had become the era par excellence in "Bengal" (West Bengal and Bangladesh).<sup>120</sup>

The earliest explicit evidence of the use of the Śaka Era in the territory of Bihar is supplied by an inscription by Gaṅgādhara and of the time of Rudramāna found at Govindapur in the Nawada subdivision of the Gaya district (now in the Nowada district).<sup>121</sup> The inscription was engraved in the Śaka year equal to "the Nandas" (=9) "the organs of sense" (=5), "the sky" (=0), and "the moon" (=1), i.e. in 1059 or A.D. 1137-38.<sup>122</sup>

Though the Kanishka Era could have been the same as the Era of A.D. 78, it ceased to be known in the area concerned after the prevalence of the Gupta Era of A.D. 319-20 (see above). Hence when the Śaka Era began to be utilised in south Bihar in the 12th century, the knowledge about it should have been imported from outside.

The Śaka era not popular in the U.P.<sup>123</sup> region in about the 11th-12th century A.D.<sup>123</sup> In contemporary Nepal the predominant era was the Newari or Nepali Samvat. But by the first half of the 12th century the Śaka reckoning was well established in upper coastal Orissa adjoining West Bengal. In the south-western section of West Bengal itself the era could have become known with or before the spread of the Gaṅga rule to the Bhāgirathī by A.D. 1135 (see above). In this section of West Bengal was Tāmra-lipta (modern Tamluk in the Midnapore district), which, according to the Dudhapani inscription of the time of Udayanana and of c. 8th century A.D., was connected by a trade route with Ayodhya<sup>124</sup> (apparently Ayodhya of the Fyzabad district of U.P.). It appears from the same record that the route went through the area of its provenance (Dudhghani Ghat near Dumduma) which was in Magadha. The locality of Govindapur was also in Magadha and not very far to the north of the Dumduma area. So we cannot deny the feasibility of the introduction of the Śaka reckoning in early mediaeval Magadha from coastal Orissa via the south-western section of West Bengal and parts of south Bihar.

Whatever might have been the route of the introduction of the Śaka reckoning in south Bihar of early mediaeval times,<sup>124a</sup> its use in the Mudgariri (Monghyr) area is suggested by the Valgudar epigraph of the time of Pala king Madanapala, dated in his 18th regnal year and also in the Śaka year 1083 (=A.D. 1161-62).<sup>125</sup> That the era was in use in south Bihar during the mediaeval period is indicated by *inter alia* Bihar Sharif stone inscription of the Śaka year 1317 (as well as Vikrama samvat 1452),<sup>126</sup> Srikund (Santal Parganas) stone inscription of the Śaka year 1503,<sup>127</sup> Mandar (Bhagalpur district) hill inscription of the Śaka year 1521,<sup>128</sup> etc.

If the year (*vatsara*) 898, the date of the composition of *Nyāya-sūchi-nibandha* by Vāchaspati Mīśra of Mithilā,<sup>129</sup> and the year (*samvat*) 1076, mentioned in the colophon of a manuscript of the *Rāmāyaṇa* copied



in Tirabhukti during the rule of Gaudadhvaja Gaṅgeyadeva,<sup>130</sup> can be attributed to the Śaka Era,<sup>131</sup> then this reckoning could have been known in parts of north Bihar by the 10th century A.D. and these dates should be considered as the two earliest known Śaka years mentioned in documents from North Bihar. However, if the year 898 is in the Śaka Era, we will have to guess that the impetus to utilise it came from the direction of Nepal, North U.P., North Bengal or South Bihar, where, however, we have no evidence of its popularity during the 10th century A.D. No such problem is faced in case of attributing the samvat 1076 to the Śaka era (corresponding to A.D. 1154-55) and to the rule of Gaṅgadeva, who ruled in Tirabhukti from A.D. 1147 to 1188.<sup>132</sup> In that case, the knowledge of the reckoning concerned could have percolated from South Bihar, where it was already known (see above). Hence the year 1076, if not the year 898, may be referred to the Śaka reckoning, a year of which was referred to as samvat in several instances.<sup>133</sup> However, it should be recorded that many scholars want to assign the latter year (1076) and not only the former one (898) to the Vikrama Era (see above).

The familiarity of mediaeval north Bihar with the Śaka Era is betrayed by *inter alia* a few records of the Oinvār or Sugaunā family of Trihut whose epigraphs generally refer to La sarī (i.e. *Lakshmanasena samvatsara*).<sup>134</sup> The Kandaha inscription of Harasīnha of this family is dated in the Śaka year 1375.<sup>135</sup> Some coins of Bhairavasīnha of the same dynasty bear the date 1411 Śaka as well as his regnal year 15.<sup>136</sup>

Unlike the uncertainty about the direction of the introduction of the Śaka Era in Bihar, we are sure about the way through which the practice of employing this system of counting dates was made known in the Tripura area. The reckoning must have travelled to Tripura via South-eastern Bangladesh (including the Chittagong, Noakhali, Comilla and Shilhet areas), which was in ancient Harikela. A part of Tripura itself might have been within the limits of Harikela. The Śaka Era, which had become popular in Harikela by c. 13th century A.D., began to be employed on coins of Tripura from the Śaka year 1386 (=A.D. 1464-65).<sup>137</sup> The same reckoning was utilised in many epigraphs of Tripura, the earliest of which being the one bearing the year 1380 or the one referring to the year 1410.<sup>138</sup>

In Kāmarūpa the Śaka Era began to be used from the early mediaeval times. The earliest known dates are furnished by the so-called Tezpur plates of Vallabhadeva and the Kanai Badasi rock inscription. The first record refers to a grant made "in the Śaka (year) counted in" (i.e. equal to) "the mountain" (=7) "sky" (=0) "(and) the Rudras" (=11)", i.e. 1107.<sup>139</sup> The date of the second document is given as "Śaka 1127" and also in words as "in the Śaka" (year expressed by) "Horse(s)" (=7), "Yugma" (=2) "(and) Iśa(s)" (=11).<sup>140</sup>

The Kanai Badasi inscription records the annihilation of the Turushkas on their arrival in Kāmarūpa on the 13th of Madhumāsa (i.e. Chaitra) of the Śaka year 1127,<sup>141</sup> corresponding to a day in March-April of A.D. 1206. The Turushkas are generally taken as the Muslim invaders under the leadership of Ikhtyar-ud-din Muhammad Bakhtyār Khalji and the recorded statement is considered as a corroboration of his humiliating defeat by a king of Kāmarūpa sometime after his conquest of Gauḍa (in May A.D. 1205) and his futile attempt to capture Tibet, as stated in the *Tabaqāt-i-Nāsiri*.<sup>142</sup> Recently, the authenticity of the date of this epigraph has been questioned, perhaps with some justification, on grounds of developed palaeographic features of some of its letters and it is taken to be a record of a later period containing a statement known from the *Tabaqāt-i-Nāsiri*<sup>143</sup> (and/or some other source?).

Even if we hesitate to count on the evidence of the epigraph at Kanai Badasi (near Gauhati) in the light of the above hypothesis, no such doubt may be expressed about the so-called Tezpur plate, which was apparently found in Assam though its exact provenance was not recorded. Palaeographically also there is no difficulty in locating it in Kāmarūpa of the 12th century A.D.<sup>144</sup>

Thus the Śaka Era was introduced in the Brahmaputra valley in Kāmarūpa by the Śaka year 1107



or A.D. 1185-86. The Śaka Era was widely used in the epigraphs of mediaeval and early modern Kāmarūpa (in Assam),<sup>145</sup> at least from the Śaka year 1487, the date of the Kamakhya (Nilachala) temple inscription of the Koch king Malladeva (or Naranārāyaṇa)<sup>146</sup> (A.D. 1533-1587). The Ahom kings began to employ this era at least from the Śaka year 1538 (=A.D. 1616-17).<sup>147</sup> At least four epigraphs of Kamarupa dated in the Śaka Era and issued during the suzerainty of the Koch kings,<sup>148</sup> who used this reckoning,<sup>149</sup> preceded the first known inscription of the Ahom rulers referring to the same system of dating. But, in view of the earlier evidence of the use of the Śaka Era in the Brahmaputra valley, the Koch kings of Koch Bihar should not be held responsible for introducing it in Kāmarūpa. In fact, its use need not have spread to Kāmarūpa from the direction of North "Bengal", though the era of "western" origin must have reached Kāmarūpa through "Bengal".

The earliest known epigraphs of "Bengal" dated explicitly in the Śaka Era have been found in the southern section of West Bengal and south-eastern Bangladesh (included earlier in ancient Harikela) (see above). So the knowledge of this system of dating might have been disseminated from Harikela (including Sylhet) and through *inter alia* the Kachar region (ancient Vareka ?) to Kāmarūpa.

It is interesting to note that the earliest of the Kāmarūpa epigraphs dated in the Śaka Era (year 1107) is older than the earliest of the "Bengal" records referring to the same reckoning. This would mean that by the year 1107 or A.D. 1185-86 at least the lower portion of Sena Kingdom including parts of Rāḍha and Daṇḍabhukti (adjoining Kaliṅga) (in the southern section of West Bengal) Vaṅga-Vaṅgāla (including parts of south-central "Bengal" upto the coast) and Harikela (in south-eastern Bangladesh) had become familiar with the Śaka Era.

The knowledge about the Śaka Era spread to the territory now in Arunachal obviously from the direction of Kāmarūpa. An interesting inscription dated in the month of Agrahāyaṇa of the Śaka year 1364 (Nov-Dec., A.D. 1442) has been discovered at the Tāmreśvarī temple near Paya in the Lohit district of Arunachal.<sup>150</sup>

In the mediaeval kingdom of Jayantia (with its capital at Jayantīpura), the territory of which is now partly in Meghalaya,<sup>151</sup> dates in the Śaka Era began to appear on coins from the year 1502 (=A.D. 1580-81).<sup>152</sup> This system of dating was introduced when the Jayantia rulers acknowledged suzerainty of the Koch kings,<sup>153</sup> who regularly used the same reckoning (see above). The Koch king Malladeva or Naranārāyaṇa, (A.D. 1553-1587), who subdued *inter alia* the Jayantia and Kāmarūpa kingdoms, was ruling in the year of introduction of the use of Śaka dates on Jayantia coins.<sup>154</sup>

Nirbhayanārāyaṇa of Dimapur, dates on whose coins have been read as Śaka 1470 or 1480 and 1481,<sup>155</sup> and Meghanārāyaṇa of Maibong, whose known coins are dated in Śaka 1488 and 1498,<sup>156</sup> are among the early Kachari kings striking dated coins. It was a fairly regular practice with the Kachari kings of Maibong (in the North Kachar hills) and later of Khaspur (in the Kachar plains) to strike coins dated in the Śaka Era.<sup>156a</sup>

The rulers of the Kachari or Heḍamba kingdom acquired the habit of using the Śaka reckoning through their contact with Kāmarūpa<sup>157</sup> or with the Koch kingdom (whose ruler Naranārāyaṇa actually conquered the Kacharis)<sup>157a</sup> or with some other locality in the North-East familiar with the era (see above).<sup>158</sup>

From the Kachar area, now in southern Assam, the system of dating under review might have reached Manipur. We do not know whether its use was introduced with Manipur's submission to the Koch ruler Naranārāyaṇa in the sixties of the 16th century.<sup>159</sup> But it is certain that from the time of Garib Newaz



(A.D. 1714-1750) dates in the Śaka Era began to appear on Manipur coins.<sup>160</sup> An interesting inscription on a bell at the Govindaji temple at Imphal is dated in the Śaka year 1797 and also in Chandrābda 1087.<sup>161</sup>

## G

The above survey of available data about the beginnings of the Vikrama and Śaka Eras and their early use in eastern India lead us to certain interesting inferences. It appears that two of the most well-known eras of India commenced during the reign of two non-indigenous kings. These were probably not founded ceremonially. Each of them might have evolved out of the counting of regnal years, even after the end of the rule of the sovereigns concerned, under the circumstances described above.

The only territory in the eastern part of the subcontinent where the Vikrama Era gained a certain degree of popularity in early-mediaeval (or proto-mediaeval) age is that of the state of Bihar. By the first quarter of the 11th century, if not still earlier, the reckoning got a foothold in that zone. In some of the other regions of eastern India its name might have become known and it might have been occasionally used, but these never made any impact on the mind of the people.

If the Kanishka Era was the same as the Śaka Era, it came into use by the first decade of its second century in the territory of Bihar or rather in ancient Magadha (in case we want to define the area more precisely). It was probably superseded by the Gupta Era of A.D. 319-20.

Of the other regions the territory of Orissa seems to have received the Śaka Era from the south or south-eastern direction. By early 11th century and during the rule of the Gaṅgas it was introduced in lower coastal Orissa. Later during the rule of the same family its use spread to upper coastal Orissa, and thence to lower sections of the territory of West Bengal.

From the last noted zone its popularity was extended, apparently through south-central "Bengal" (ancient Vaṅga and Vaṅgāla), to the area now in south-eastern Bangladesh (ancient Harikela). There are reasons to believe that by the last quarter of the 12th century the reckoning was fairly well-known in at least parts of the Sena kingdom (including its lower sections in South Rāḍha-Daṇḍabhukti, Vaṅga-Vaṅgāla and Harikela?). Through the Sena kingdom the knowledge of its use must have been extended to Kāmarūpa by about the last quarter of the 12th century A.D.

The knowledge of the era might have travelled from the Sena territory and through the Kachar region to the Nowgong district area, parts of which must have been in ancient Kāmarūpa. Thus within a century and half of the commencement of its use in epigraphs of the territory of south Orissa it reached the Brahma-putra Valley.

The Koch rulers of Koch Bihar learnt the use of the era in the second half of the 16th century by coming into contact with Kāmarūpa or Harikela or an area in North "Bengal" lying to its immediate east. Available data favour the first alternative.

The Koch power might have been responsible for inspiring the Jayantia rulers and, to some extent, also the Kachari kings to use the Śaka Era. From Kachar it intruded into Manipur by the first half of the 18th century A.D.

The popularity of the Śaka reckoning probably spread from the lower sections of the zone of West Bengal to its upper areas and thence to parts of North "Bengal". These regions were however also adjacent and exposed to the territory of Bihar (where were *inter alia* Tīrabhukti, Magadha and Aṅga).



The knowledge of the Śaka Era reached south Bihar by the second half of the 11th century A.D. We are not sure about the direction from which Bihar received the era.

In parts of eastern India, particularly in the territories of "Bengal" and Assam the Śaka reckoning became the era par excellence during the mediaeval age. This, however, does not mean that no other reckoning was in use in those areas.<sup>162</sup>

In certain districts of Bihar both the Śaka and Vikrama Eras enjoyed a fair degree of popularity.<sup>163</sup> Several records are known to have been dated in both the reckonings.<sup>164</sup>

The years of the reckonings are given either in figures or in words or in both. Some times the words indicate a chronogram. Often epigraphic records and sometimes manuscripts furnish details of dating like (a) the names of the month and fortnight and the exact number and name of the day, or (b) the name of the month and exact number and name of the day.

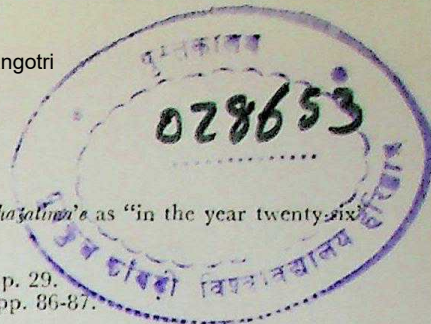
The two systems of dating, especially the one named after the Śakas, might have the potentiality of becoming fairly well known in East Indian academic circles, particularly in those relating to astronomy and astrology, by about the beginning of the early mediaeval or proto-mediaeval age (C. A.D. 750-1200). But their use in daily life and the routes and time of their diffusion are more reliably indicated by their occurrences in official and private records of known provenances than portable manuscript referring to either of these eras. Only those dated manuscripts which clearly name the place where it was written by its scribe can be of some help to us in our relevant study.<sup>165</sup> But their number is insignificant in comparison with the available epigraphic documents.

The above inferences drawn chiefly from epigraphic sources are no doubt tentative in nature. They have, however, the merit of having taken into account all types of known data.

#### NOTES

- <sup>1</sup> For a general discussion on the Vikrama and Śaka Eras, see D. C. Sircar, *Indian Epigraphy*, Delhi, etc., 1965, pp. 251f.
- <sup>2</sup> An inscription at Anahilvad-Pattana (Gujarat) refers to a date as Somavāra, 9th day of the bright fortnight of Mārgaśīrsha of the Vikrama year 1651, and also to another date as Guruvāra, 12th day of the dark fortnight of Vaiśākha of the Vikrama year 1652 and the Allai year 41. The first date corresponded to Monday, November 11, 1694. The second date, which must be placed after the commencement of the year 41 of Akbar's Ilahi Era in February or March of 1696, fell on Thursday, May 13, 1696. (L. D. Swamikannu Pillai, *An Indian Ephemerics*, vol. IV, Madras, 1922, pp. 130). This would have been possible only if the Vikrama years used here began in Kārttika. (*Epigraphia Indica*, vol. I, pp. 323-24). See also *Ibid.*, p. 174; *Indian Antiquary*, 1890, vol. XIX, p. 21; etc.
- <sup>3</sup> G. S. Ojha, *Bhāratiya Prāchīna Lipimālā* (in Hindi), 3rd edition, Delhi, 1959, pp. 169-170.
- <sup>4</sup> Al-Birūnī, *Tahqīq-i-Hind*, Ch. XLIX.
- <sup>5</sup> N. Brown, *The Story of Kālaka*, Washington, 1933, p. 43, vv. 65 and 68-70.
- <sup>6</sup> D. R. Bhandarkar, *A List of Inscriptions of Northern India*, no. 926.
- <sup>7</sup> *EL*, vol. XXXIV, pp. 143f.
- <sup>8</sup> S. D. Swamikannu Pillai, *op. cit.*, vol. IV, Madras, 1922, p. 130.
- <sup>9</sup> Bhandarkar's *List*, nos. 17, 37, etc.
- <sup>10</sup> Bhandarkar's *List*, nos. 3, 4, 8, 9, 16, 17, 18, 37, etc.
- <sup>11</sup> *Ibid.*, nos. 3 and 5.
- <sup>12</sup> *EL*, vol. XXVII, pp. 263f; vol. XXIII, p. 52; Bhandarkar's *List*, nos. 2 and 4.
- <sup>13</sup> *EL*, vol. VIII, p. 78.
- <sup>14</sup> Diodorus Siculus, *Bibliothekes Historikes*, XVII, 98; Arrian, *Indike*, IV; R. C. Majumdar (editor), *The Age of Imperial Unity, The History and Culture of the Indian People*, vol. II, Bombay, 1951, p. 163.
- <sup>15</sup> *Journal of the Asiatic Society*, 1981, vol. XXIII, pp. 144-147.
- <sup>16</sup> H. W. Bailey in the *Journal of the Royal Asiatic Society of Great Britain and Ireland*, 1978, pp. 3-13, and 1982, pp. 150-155; G. Fussman in the *Bulletin de l'École Française d'Extrême Orient*, 1980, pp. 2f; B. N. Mukherjee in the *Journal of Ancient Indian History*, 1977-78, vol. XI, pp. 93-114; Mathurā and Its Society—the Śaka-Pahlava Phase, Calcutta, 1981, pp. 52f; *JAS*, 1981, vol. XXIII, A. D. H. pp. 161-162. See also A.D.H. Bivar in the *South Asian Archaeology*, 1979 (edited by it Härtel), Berlin, pp. 369f. and R. Solomon in the *Journal of the American Oriental Society*, 1982, vol. CII, pp. 59f.
- <sup>17</sup> *JAIH*, 1977-78, vol. XI, pp. 102-103.
- <sup>18</sup> *JAS*, 1981, vol. XXIII, p. 161.
- <sup>19</sup> *JRAS*, 1982, p. 150.
- <sup>20</sup> *BEFEO*, 1984, vol. LXXIII, p. 39.





- <sup>19</sup> *Ibid.*, 1935, vol. LXXIV, pl. XI. Fussman is wrong in translating the word *shaviṣa-vashatimāe* as "in the year twenty-six" (c.f., the word *tiṣatimāe* denoting the figure 103 in the Takht-i-Bahi record).
- <sup>20</sup> *JAIH*, 1977-78, vol. XI, p. 96; *Bharati*, 1984, ns. no. 2, pp. 21f.
- <sup>21</sup> B. N. Mukherjee, *Central and South Asian Documents on the Old Śaka Era*, Varanasi, 1973, p. 29.
- <sup>22</sup> B. N. Mukherjee, *An Agrippan Source—A Study in Indo-Parthian History*, Calcutta, 1970, pp. 86-87.
- <sup>23</sup> *Ibid.*.
- <sup>24</sup> The "tetradrachm" and "drachm" coins of Itravarman, made of bronze or base silver (?), display on the obverse a male on horse holding a whip and on the reverse the figure of standing Pallas. The reverse inscription can be read as *Vijayamitra-putrasa Itravarmasa Apracharajasa* (see above n. 13; J. H. Marshall, *Taxila*, vol. III, Cambridge, 1951, pl. 241, nos. 185-188; G. K. Jenkins and A. K. Narain, *Coin Types of the Śaka-Pahlava Kings of India*, Varanasi, 1957, p. 23). Attempts have been made to read the name of the ruler on some drachms as *Indravarma* (J. H. Marshall, *op. cit.*, p. 813). But on these pieces the name can very well be read as *Itravarma* (*ibid.*, vol. III, pl. 241, no. 185).
- The Greek inscription on the obverse of the coins of Itravarman is often illegible. However, traces of the expression *Azzau* (= *Azzou* = *Azou*), meaning "of Azes", may be noticed on two of Itravarman's tetradrachms, now in the British Museum (B. N. Mukherjee, *An Agrippan Source—A Study in Indo-Parthian History*, p. 88 and pl. III, no. 14). This Azes should be identified with Azes II, since the obverse device (an equestrian male holding a whip) on Itravarman's coins was used by Azes II and not by Azes I (*ibid.*, pp. 86-87). To a Scytho-Parthian monarch like Azes II the Greek script and language should have been more important than the Kharoshthī script and Prakrit language, since not only the Indo-Greeks (who ruled in *interalia* the north-western area of the subcontinent before and to some extent contemporaneously with the Scytho-Parthians), but also the Imperial Parthians regarded the Greek as the most important language (*ibid.*, p. 87). Hence the occurrence of the name of Azes (II) in the Greek legend and that of Itravarman in the Prakrit inscription should indicate the former as the overlord of the latter.
- This inference receives support if some of Itravarman's coins were really made of base silver (*CTSPKI*, p. 23). Silver coinage of the north western part of the Indian subcontinent became generally debased during the rule of Azes II (*ASSIPH*, pp. 223-224). So the debased silver pieces, struck by a subordinate chief like Itravarman, should not be placed before the reign of Azes II. On other hand, since Gondophares I, the immediate successor of Azes II in the north-western part of the Indian subcontinent (*ibid.*, p. 103), could not strike silver coins in that area on account of the heavy debasement of local silver currency by the time of Azes II (*ibid.*, p. 225), Itravarman's base silver pieces could not have been put in circulation in that zone during or after the reign of Gondophares I. In fact, Gondophares I was served by Aśpavarman, son of Itravarman (see below n. 29). Thus Itravarman may be dated to the period of Azes II.
- <sup>25</sup> *JAIH*, 1977-78, vol. XI, p. 99.
- <sup>26</sup> *Ibid.*, pp. 102-103.
- <sup>27</sup> *CTSPKI*, p. 87; *Numismatic Chronicle*, 1944, p. 99.
- <sup>28</sup> *CTSPKI*, p. 88; *NC*, 1944, p. 100; R. B. Whitehead, *Catalogue of the Coins in the Punjab Museum, Lahore*, vol. I, Oxford, 1914, pl. XV, no. 35.
- <sup>29</sup> The silver coinage of the north-western part of the Indian subcontinent became heavily debased by the time of Azes II (see above n. 10). None of the silver pieces of Gondophares I can be attributed to that area (*ASSIPH*, pp. 223-225), where he minted billon and copper (*PMC*, vol. I, pp. 146; *ASSIPH*, pp. 93-106). His billon coins (wrongly described on page no. 17 of *CTSPKI* as base silver pieces) were issued probably in place of silver coins. Since the family of Azes (Azes I, Azilises and Azes II), like the earlier rulers of the area concerned, struck silver as well as copper coins, and since Gondophares I and his immediate successors minted billon and copper (and not base silver as wrongly stated in *CTSPKI*) in the area concerned, the latter group should be placed after the former dynasty in that territory. So, Gondophares I ruled in the north-western part of the subcontinent after Azes II. And as Aśpavarman served under both the kings in different periods, Gondophares I should have been the immediate successor of Azes II in that region.
- <sup>30</sup> *ASSIPH*, pp. 183-184. Compare W. Wroth, *A Catalogue of the Greek Coins in the British Museum, Catalogue of the Coins of Parthia*, London, 1903, pl. XXV, nos. 5 and 6 with *NC*, 1890, pl. XIII, no. 2.
- <sup>31</sup> See above n. 30; see also *ASSIPH*, p. 184 and p. 191, n. 9.
- <sup>32</sup> W. Wroth, *op. cit.*, p. 146; N. C. Debevoise, *A Political History of Parthia*, Chicago, 1937, p. 270.
- <sup>33</sup> K. W. Dobbins has suggested in an article published in *JAS* that the Arsacid ruler "Orodes II and his brother Mithridates III, murdered their father Phraates III in 58 B. C. and ruled jointly for a short time until Orodes disposed of Mithridates". Dobbins wants to identify Mithridates III with Spalirises with whom Azes I issued joint coinage and observes that Orodes II was also known as Azes (I). Dobbins thinks that Orodes I as Azes (I) initiated the Azes Era in 58 B.C., which later became known as the Vikrama Era (*JAS*, 1983, vol. XXV, nos. 1-4, pp. 29-307).
- Dobbins seems to have been influenced by the facts that Orodes II and his brother Mithridates III murdered their father Phraates III in c. 58/57 B.C. (N. C. Debevoise, *op. cit.*, p. 75; Cassius Dio Cocceianus, *Discourse*, XXXIX, 56), the year in which began the so-called Vikrama Era. There is, however, no reliable evidence in support of the joint rule of the two brothers. In fact they quarreled bitterly over the Arsacid kingdom till Mithridates was eliminated in 55 B. C. (N. C. Debevoise, *op. cit.*, pp. 76-78; E. Yarshater (editor), *The Cambridge History of Iran*, vol. III, pt. I, Cambridge, 1983, pp. 48-49). There is also no iota of evidence identifying Azes I with Orodes II. The absurdity of Dobbins's hypothesis is further apparent from his attempts to identify Orodes II not only with the Scytho-Parthian ruler Azes I, but also with the Indo-Greek king Strato II.
- The murder of Phraates III and the beginning of the Azes Era (= so-called Vikrama Era) could have happened in two different areas in the same year. But this does not identify the murderer as the founder of the era.
- <sup>34</sup> S. Konow, *Corpus Inscriptionum Indicarum*, vol. II, pt. I, *Kharoshthī Inscriptions with the Exception of Those of Aśoka*, Calcutta, 1929, p. 17 and pl. III, no. 2.
- <sup>35</sup> M. Monier-Williams, *A Sanskrit-English Dictionary*, reprint, Oxford, 1951, p. 301.
- <sup>35a</sup> The Gangdhar inscription of the year 480 refers to the year concerned as *Yāteshu* ("having expired") as well as *Kṛiteshu*. Here the latter word must be taken as a proper name denoting the era and not alluding to the year concerned as "expired", which idea is conveyed by the term *Yāteshu*.
- <sup>36</sup> D. C. Sircar, *Ancient Mālava and the Vikramāditya Tradition*, pp. 162f; see also *IE*, pp. 251f.
- <sup>37</sup> *IE*, vol. XXXVII, p. 1.
- <sup>38</sup> *Annual Report, Archaeological Survey, Mysore*, 1909, p. 31; 1910, pp. 45-47; *IE*, p. 263, f.n. 1.
- <sup>39</sup> *Bhandarkar's List*, nos. 1078-1082.
- <sup>40</sup> *Ibid.*, nos. 1082, 1091, 1116, etc.
- <sup>41</sup> H. C. Raychaudhuri, *Political History of Ancient India*, 5th edition, Calcutta, 1950, pp. 305; *AIU*, pp. 184; etc. Many scholars are, however, wrong in attributing the known years of Nahapāna's rule to the Śaka Era. These cannot be referred to that



- reckoning and may perhaps be considered as his regnal years (B. N. Mukherjee, *The Kushānas and the Deccan*, Calcutta, 1968, p. 101).
- <sup>42</sup> R. Saloman, "Western Kshatrapa and Related Coins", *The American Numismatic Society Museum Notes*, no. 22, 1977, p. 134; A. S. Altekar, *Coinage of the Gupta Empire*, Varanasi, 1957, pp. 150f; E. J. Rapson, *Indian Coins*, Strassburg, 1907, p. 22.
- <sup>43</sup> *EI*, vol. XXVI, pp. 297f; B. N. Mukherjee, *The Disintegration of the Kushāna Empire*, Varanasi, 1976, pp. 14-15.
- <sup>44</sup> *DKE*, pp. 14-15. The original location of the pillar, bearing *inter alia* Harishena's *prasasti* of Samudragupta, which is now at Allahabad, must have been originally somewhere at Kauśāmbī, since it also displays two records of Aśoka addressed to the officials at Kauśāmbī.
- <sup>45</sup> *DKE*, p. 14. See below n. 47.
- <sup>46</sup> *KD*, pp. 108-109; *DKE*, p. 12.
- <sup>47</sup> See below n. 55. See the *Journal of the American Oriental Society*, 1982, pp. 361f. for arguments against separating the Śaka Era of A.D. 78 from a Koshāna (Kushāna) Era, identifiable with the Kanishka Era, on the basis of an alleged evidence of the *Yavanajātaka* of Sphujidhva (ch. 79, vv. 14-15). This Kushāna era, counted from a time falling "X" number of years before A.D. 63, should have a pre-Kanishka origin. "Its absence from the records referring to Kushāna rulers themselves may indicate its use mainly in the academic circle or rather in the circle of astronomers who probably counted it, perhaps as a convenient mode of calculation, for the date of an incident connected with the Kushāna history". For examples of such types of eras having no bearing on the daily life or political life of the people, see E. Sachau, *Alberuni's India*, reprint, Delhi, 1964, vol. II, pp. 1f.
- <sup>48</sup> G. R. Sharma, *Excavations at Kauśāmbī*, 1949-50, *Memoirs of the Archaeological Survey of India*, no. 74, Delhi, 1969, pp. 21 and 23.
- <sup>49</sup> G. R. Sharma, *Kushāna Studies*, Allahabad, 1968, pl. XIX, nos. A and B; pl. XX, no. A. One of these two epigraphs clearly refers to Kanishka, though its date portion is mutilated. The other record, in which the royal name can be read as Ka... and the date probably as the year 6 (?), seems to refer to Kanishka's reign.
- <sup>50</sup> *EI*, vol. XXIV, pp. 210-212. A Ghosh has doubtfully read the date of this inscription as 20 (+) 2 (*The Indian Historical Quarterly*, vol. X, p. 576).
- <sup>51</sup> It has been claimed that a fragmentary inscription referring to the period of Vāsishka was found sometime back at Garhwa, presumably near Kosam (*EK*, p. 10). The Kushāna authority in this area might have continued up to sometime in or shortly before the year 81 (of the Kanishka Era), by which year the Maghas occupied the locality.
- <sup>52</sup> See below n. 55.
- <sup>53</sup> Though we do not know at present any document dated in the year 1 of Kanishka's reign, the reckoning concerned must have been counted from his first regnal year. The year 20 of Vāsishka is furnished by the Kamra record. The year 25 or 26 belonging to Huvishka's reign, is indicated by a Mathura pedestal inscription.
- <sup>54</sup> *Calcutta Review*, 1984, p. 54.
- <sup>55</sup> Kanishka himself would not have faced this problem, even if he was for some time a co-ruler of Vīma. All dated pre-Kanishka Kushāna records found in the North-West refer to well established eras. Hence for dating the subjects of Kujula and Vīma did not use regnal year. This was done in the period of Kanishka when he began to reign as a co-ruler or sole ruler. Perhaps Kanishka I insisted on using regnal years for dating in his empire.
- <sup>56</sup> It is well-known that there are different theories about the date of Kanishka, the current ones placing him in the late 1st century or at different times of the 2nd or even the 3rd century A. D. But none of the arguments assigning the year 1 of Kanishka I beyond the 1st century A.D. furnish so positive an evidence as that available from Kosam and discussed here.
- There are also strong circumstantial evidence dating Kanishka to about the last quarter of the 1st century A.D.
- The Naqsh-e-Rustam inscription of Shāpur I, dated to c. A.D. 262, proves his authority over a great part of the western portion of the Kushāna empire (up to Paskibouron or Peshawar in the east). This must have happened after the fall of the empire sometime in the reign of Vāsudeva II and after a lapse of certain years following the last known date of Vāsudeva I or the year 98 of the era of Kanishka I. In that case the latter could not possibly have begun to rule after c. A.D. 150. On the other hand, since Vīma, the predecessor of Kanishka I, imitated on a great number of his coins a coin-device (King at alter) of the Parthian King Gotarzes II (A.D. 38-51), Kanishka could not possibly have begun to rule before c. A.D. 38, even if he was for a certain period a co-ruler of Vīma (of which we have no evidence).
- Chapter 118 of the *Hou Han-shu*, whose information on the western countries was mainly based on the report of Pan Yung prepared at the end of the reign of emperor An (A.D. 107-125), refers to the Yüeh-chih conquest of Tung-li with its capital at Sha-ch'i. Sha-ch'i has been identified with Sāketa near Ayodhyā in the Fyzabad district of U. P. Referring apparently to the same event, the Tibetan work *Li-yul-gyi to-rgyus* speaks of the conquest of So-Ked, i.e. Sāketa, by *inter alia* Kanik=Kanishka I (*KD*, pp. 37-41). If these observations are correct, Kanishka I must have begun to rule by c. A.D. 125.
- The date (year 279) of Dasht-e-Nawur record of Vīma has been referred to the Arsacid Era of 247 B.C. and that (year 187) of his Khalatse inscription has been attributed to the Old Śaka Era of c. 170 B.C. (*CSADOSE*, pp. 32f and 104, n. 1) (see also Appendix I). Hence two probable dates of the reign of Vīma are c. A.D. 32 and c. A.D. 17. In that case, it is difficult to place his successor Kanishka beyond the 1st century A.D.
- According to Chapter 77 of the *Hou Han-shu* "in the second year of the yung-yüan era (A.D. 90) the Yüeh-chih sent Hsieh, the *fu-wang*, with 70,000 soldiers to attack (the Han general) Pan Ch'ao". Chapter 17 of the *Hou Han-shi* refers to Hsieh as the King of the Yüeh-chih. Hence Hsieh was the "king" and also *fu-wang* or "second or assistant-king" of the Yüeh-chih or the Kushāna empire in A.D. 90. Obviously he was a co-ruler enjoying royal status and titles.
- The character *Hsieh* is considered to have been pronounced as *dyag* in Archaic Chinese and as *zya* in Ancient Chinese. If the first pronunciation is valid in our case, a part or the whole of the original word transliterated as *Hsieh* might have been *shk* or *shka* or *ishka*. This might well have been a part of the name of Kanishka, or Vāsishka or Huvishka. Hence a Kushāna king with one of these names was a co-ruler in A.D. 90. (see the *Indian Museum Bulletin*, 1973, vol. VIII, pp. 115-117 for relevant discussion and references). As Kanishka I was the earliest Kushāna King with such a name, he or one of his two successors named Vāsishka and Huvishka should have been a co-ruler c. A.D. 90. Hence he should have begun to reign by that year.
- <sup>57</sup> *EI*, vol. XXXI, pp. 229-31.
- <sup>58</sup> *EI*, vol. XXIV, p. 148.
- <sup>59</sup> *Indian Culture*, vol. III, p. 177.
- <sup>60</sup> R. C. Sharma has stylistically placed the Buddha image in question in the post-Kushāna and pre-Gupta period. Hence the year 230, in which its pedestal inscription is dated, can be referred only to the era of A.D. 78=Kanishka Era (R. C. Sharma, *Buddhist Art of Mathura*, New Delhi, 1985, pp. 217-218; fig. 134). The evidence of the continuity of the Kanishka Era in its second century proves the futility of the hypothesis that after the first hundred years of the this reckoning the records began



- to be dated with the figure of 100 omitted (J. E. van Lohuizen De Leeuw, *The "Scythian" Period*, Leiden, 1949, pp. 232f) and of the theory that about this time a second Kushāna era was started (J. M. Rosenfield, *The Dynastic Arts of the Kushans*, Berkeley and Los Angeles, 1967, pp. 271 and 295). We have elsewhere rejected the arguments in favour of these suggestions based on stylistic grounds (B. N. Mukherjee, "Problems of Dated Images of the Mathurā School of Sculpture of the Kushāna Period", *Central Asia in the Kushāna Period*, vol. II, Moscow, 1976, pp. 346f).
- <sup>59</sup> *EI*, vol. II, p. 199; vol. X, Appendix, no. 59.
- <sup>60</sup> B. N. Mukherjee, *Mathurā and Its Society,—The Śaka-Pahlava Phase*, Calcutta, 1981, pp. 1f.
- <sup>61</sup> H. Lüders, *Mathurā Inscriptions* (edited by K. L. Janert), Göttingen, 1961, p. 162; *Indian Antiquary*, 1908, vol. XXXVII, pp. 23f, and pl.
- <sup>62</sup> *Bhandarkar's List*, no. 17.
- <sup>63</sup> *Ibid.*, no. 10.
- <sup>64</sup> B. N. Puri, *The History of the Gujara-Pratihāras*, Bombay, 1957, pp. 147f.
- <sup>65</sup> *IE*, pp. 257-258.
- <sup>66</sup> *Ibid.*, *EI*, vol. XXIX, pp. 52-53; S. C. Vidyabhushana, *A History of Indian Logic*, reprint, Delhi, etc., 1971, p. 133 and f.n. 3; see also below n. 130.
- <sup>67</sup> *EI*, vol. XXXV, pp. 130f.
- <sup>68</sup> *Ibid.*, vol. XXXVI, pp. 10-11 and pl.
- <sup>69</sup> *Bhandarkar's List*, nos. 299, 338, 340 and 1759; *EI*, vol. XXIII, pp. 222f; vol. XXXIV, pp. 23f; vol. XXXV, pp. 155f; etc.
- <sup>70</sup> *Journal and Proceedings of the Asiatic Society of Bengal*, vol. XVIII, pp. 83f.
- <sup>71</sup> R. D. Banerji, *The Palas of Bengal, Memoirs of the Asiatic Society of Bengal*, no. 5, Calcutta, 1915, p. 109. The record is also dated in the fourteenth year of the past kingdom of Govindapāla.
- <sup>72</sup> *EI*, vol. VII, pp. 99f.
- <sup>73</sup> *Ibid.*, vol. XXXVI, p. 40.
- <sup>74</sup> For examples we can refer to the Gaya inscription of the Vikrama year 1325 and of the time of Ghiyas-ud-din Balban (*Bhandarkar's List*, no. 571), Ghoshikundi inscription of the year 1610 and time of Islam Shāh (D. C. Sircar, *Some Epigraphical Records of the Mediaeval Period from Eastern India*, Delhi, 1979, p. 54), grant of Bhulladeva of smavat 1381 referring to Muhammad bin Tughluq (*EI*, vol. XXXV, pp. 14f), etc.
- <sup>75</sup> Some scholars have wrongly interpreted the dates of a few inscriptions of early and early mediaeval Orissa as alluding to the Vikramī Era. (For an example see S. N. Rajaguru, *Inscriptions of Orissa*, vol. VI, Bhuvaneswar, 1971, pp. 82-84).
- <sup>76</sup> A. K. Maitra, *Gauḍa-Lekhamālā*, Rajshahi, 1319 B.S., pp. 107-108.
- <sup>76a</sup> H. P. Shastri, *A Descriptive Catalogue of Sanskrit Manuscripts in the Government Collection, under the care of the Asiatic Society of Bengal*, Calcutta, 1917, pp. 21-22; no. 8067.
- <sup>76b</sup> A. K. Bhattacharyya, *A Corpus of Dedicatory Inscriptions From Temples of West Bengal*, Calcutta, 1982, p. 60.
- <sup>77</sup> *EI*, vol. XXXI, pp. 229-237.
- <sup>78</sup> *IE*, p. 265.
- <sup>79</sup> D. Pingree, *The Yavanajātaka of Sphujidhvaja*, vol. I, Cambridge (Mass), 1978, pp. 5 and 505-506; *Journal of the American Oriental Society*, 1982, pp. 361-363.
- <sup>80</sup> Sphujidhvaja, *Yavanajātaka*, ch. 79, vv. 61 and 62.
- <sup>81</sup> *Ibid.*, ch. 79, vv. 14 and 15; D. Pingree, *op. cit.*, p. 496.
- <sup>82</sup> *Journal of the American Oriental Society*, 1981, p.
- <sup>83</sup> *EI*, vol. XXXVII, p. 1.
- <sup>84</sup> *EI*, vol. XXV, pp. 4f; see also vol. VI, p. 7; etc.
- <sup>84a</sup> See above n. 38.
- <sup>85</sup> *Bhandarkar's List*, nos. 1089, 1094, 1096, 1097, etc.
- <sup>86</sup> *Ibid.*, nos. 1090, 1091, etc.; S. N. Rajaguru, *Inscriptions of Orissa (c. 1045-1190 A.D.)*, vol. III, pt. I, Bhuvaneswar, 1960, pp. 1f.
- <sup>87</sup> R. C. Majumdar (editor), *The Age of Imperial Kanauj, The History and Culture of the Indian People*, vol. V, Bombay, 1955, p. 142.
- <sup>88</sup> *Bhandarkar's List*, nos. 1090 and 1091.
- <sup>89</sup> *IO*, vol. III, pt. II, p. 15.
- <sup>90</sup> *Ibid.*, pp. 63 and 169 and 210; vol. II, Bhuvaneswar, 1960, pp. 157 and 217. Nadagam, which has yielded a record of the Śaka year 979, is included in the Srikakulam district, according to S. N. Rajaguru (*IO*, vol. III, pt. I, p. 6), and in the Ganjam district, according to Dr. Bhandarkar (*List*, no. 1093).
- <sup>91</sup> *IO*, vol. III, pt. I, p. 137.
- <sup>92</sup> *Ibid.*, p. 174; *Journal of the Asiatic Society of Bengal*, 1896, vol. LXV, pp. 229f.
- <sup>93</sup> *Journal of the Andhra Research Society*, vol. VI, p. 215.
- <sup>94</sup> N. G. Majumdar, *Inscriptions of Bengal*, vol. III, Rajshahi, 1929, p. 42; R. C. Majumdar, *History of Ancient Bengal*, Calcutta, 1971, p. 225.
- <sup>95</sup> S. C. Banerjee, *A Companion to Sanskrit Literature*, Delhi, etc., 1971, p. 96.
- <sup>96</sup> *IE*, p. 265.
- <sup>96a</sup> H. P. Shastri, *op. cit.*, pp. 161-162, no. 4732.
- <sup>96b</sup> *JAIH*, vol. IV, p. 120.
- <sup>97</sup> *The Indian Historical Quarterly*, 1934, vol. X, pp. 321 and 328-329.
- <sup>98</sup> *HAB*, p. 377.
- <sup>99</sup> *Ibid.*, p. 269, n. 81.
- <sup>100</sup> *Indian Culture*, vol. IV, pp. 228-229; *HAB*, p. 242.
- <sup>101</sup> *HAB*, p. 241; *JASB*, 1906, p. 17; ns., vol. IX, p. 277; ns., 1921, vol. XVII, pp. 7-16; *The Indian Historical Quarterly*, vol. III, pp. 186f.
- <sup>102</sup> S. C. Banerjee, (editor), *Sadukti-Karṇāmṛta of Śrīdharadāsa*, Calcutta, p. 1 and colophon.
- <sup>103</sup> N. G. Majumdar, *Inscriptions of Bengal*, vol. III, p. 470. In Karṇātaka region the Śaka Era should have been known from the time of the Early Chālukyas of Badami.
- <sup>104</sup> A. Bhattacharyya, *Historical Geography of Early and Mediaeval Bengal*, Calcutta, 1976, pp. 48f.
- <sup>105</sup> *IB*, vol. III, p. 47.
- <sup>106</sup> See above n. 104.
- <sup>107</sup> *HAB*, p. 225.
- <sup>108</sup> H. G. Raverty, *Tabaqāt-i-Nāsiri*, vol. I, reprint, New Delhi, 1970, pp. 557-559.



- <sup>109</sup> A. Bhattacharyya, *op. cit.*, pp. 52f. Madanapāla, who had under him *inter alia* south-east Bihar, was called "Lord of Gauḍa" (D. C. Sircar, *Pāla-Sena Yügera Vaiśānucharita*, Calcutta, 1981, p. 96).
- <sup>110</sup> *The Journal of the Numismatic Society of India*, 1973, vol. XXXV, p. 197.
- <sup>111</sup> *Ibid.*, pl. XV, no. 1.
- <sup>112</sup> V. V. Tsybulsky, *Calendars of Middle East Countries*, Moscow, 1979, pp. 62-63.
- <sup>113</sup> H. G. Raverty, *op. cit.*, p. 558.
- <sup>114</sup> S. C. Banerjee, *op. cit.*, p. 651.
- <sup>115</sup> *IHQ*, Vol. IX, p. 282.
- <sup>116</sup> *EL*, vol. XXVII, p. 182; vol. XXX, p. 184; *IB*, vol. III, p. 158. To this class of evidence we may add a manuscript of the *Pañcharakṣā*, dated in the month of Bhādra of the year 1211 of the Śaka Era "of the Śaka narapati" and in the reign of Madhusena, the "lord of Gauḍa", if we can consider him as a later Sena ruler of East "Bengal" (H. P. Shastri, *op. cit.*, p. 117, no. 4078).
- <sup>116a</sup> A. Karim, *Corpus of Muslim Coins of Bengal (Down to A.D. 1538)*, Dacca, 1960, pp. 191-193. It is not clear whether the Śaka Era was popular about this time in the region of North "Bengal" now included in the West Dinajpur district of West Bengal and Dinajpur, Rangpur, Rajshahi and Bogra areas of Bangladesh. However, the degree of the probability of its use in the territory concerned is enhanced if we can identify Danujamardanadeva with King Gaṇeśa, who was originally a land-lord of Bhāturiyā in North "Bengal".
- <sup>117</sup> Janab Abu Taleb, who first noticed this record, attributed the date to the Śaka Era (*Ittephak*, Dacca, 3rd Magh, 1377 Vaiṣābha). But palaeographic features of the letters *u* and *ta* and the occurrence of the Arabic word *tārikha* rule out a date in the early 10th century of the Śaka Era. But the relevant forms of *u* and also *ta* can be noticed in writings of the 15th century A.D. (*JASB*, 1938, no. 3, vol. IV, p. 373, col. VI). Hence the year 920 can be attributed to the Bengali Era of A.D. 593-94. Hence 17 Māgh of the Śaka (year) 920 fell in February-March of A.D. 1513-14. In that case this epigraph seems to be the earliest known record dated in the Bengali Era. However, if the counting of Bengali *san* started with the Illahi Era of Akbar, which itself commenced with his reign (from 14.2.1556) and the solarisation of Hijra year 967 (A.D. 1555-1556), then the date of the Gorkui inscription should not be referred to the Bengali Era. It may be assigned to the Hijra reckoning.
- <sup>118</sup> A. K. Bhattacharyya, *op. cit.*, p. 60. In this epigraph the Śaka year 1525 is wrongly attributed to Vikrama "abada" (=abda). The dates given in this inscription should correspond to A.D. 1603-04. In some records the Malla Era is mentioned as Malla-Śaka as well as Śaka (*ibid.*, pp. 66, 70, 77, etc.).
- <sup>119</sup> The kings of Koch Bihar, who used the Śaka Era for dating their coins at least from the Śaka Year 1477 occasionally used the expression *Rājāśaka* denoting a separate reckoning [R. C. Majumdar *et al.*, *Vāmilā Deśera Itihāsa, Madhyayuga* (in Bengali), Calcutta, 1380 B. S. pp. 479 and 501]. Here the word *Śaka* means "a year" or "an era".
- <sup>120</sup> Of the inscriptions of West Bengal dated in the Śaka Era and belonging to the 16th or early 17th century we can refer to the Barakar (Burdwan district) temple inscriptions of the Śaka Years 1383 and 1468 (*JASB* Letters, 1936, pp. 24f.), Wari temple (Malda district) inscription of the Śaka Year 1467 (*EL*, vol. XXXV, p. 181), Chhatna epigraph of the Śaka Year 1475, Radharaman (Vishnupur, Bankura district) temple inscription of the Śaka Year 1509, Vaidyapur (Burdwan Dist.) temple inscription of the Śaka Year 1520, Gokarna (Murshidabad dist.) inscription of the Śaka Year 1521, Dharapat inscription (Bankura district) of the Śaka Year 1525, Mangalamado temple (Midnapur dist.) inscription of the Śaka Year 1526, Burosiv-tala (Kheychaghat, Hooghly dist.) inscription of the Śaka Year 1547, Churisa (Sripur, Birbhum district) temple inscription of the Śaka Year 1555, Kabilaspur temple (Birbhum dist.) inscription of the Śaka Year 1565, etc. (See A. K. Bhattacharyya, *op. cit.*, relevant pages). Of the north "Bengal" inscriptions of early 18th century, we can refer to the Ghoraghat inscription of Prāṇanātha of the Śaka Year 1637 (*IHQ*, 1936, vol. XII, p. 356). Dates of several texts and mss. of mediaeval "Bengal" are given in the Śaka Era. For an example, we can refer to the *Manasāvijaya* by Vipradāsa composed "in the Śaka Year enumerated by the seas (=7), the moon (=1), the Vedas (=4) and the earth (=1)" (*i.e.* in 1417=A.D. 1495-96) "when King Hussain Shāh is the lord of Gauḍa".
- <sup>121</sup> *EL*, vol. II, p. 330 and pp. 333f.
- <sup>122</sup> *Ibid.*, p. 338.
- <sup>123</sup> An inscription of the Śaka Year 784 has been found at Deogaḍ in the Jhansi district of U. P. (*Bhandarkar's List*, no. 1085).
- <sup>124</sup> *EL*, vol. II, p. 345.
- <sup>124a</sup> The Maga Brāhmaṇa families of Śākadvīpa might have played some role in making the Śaka Era known in *inter alia* early mediaeval Bihar. For an example, we can refer to the Maga Brāhmaṇa Gaṅgādhara whose record at Govindapur in south Bihar is dated in this era (Śaka year 1059). He was well-versed in *inter-alia* *gyotisha* (astrology) (*EL*, vol. II, p. 336) and so must have learnt by heart the use of the reckoning in question.
- <sup>125</sup> *EL*, vol. XXVIII, p. 145.
- <sup>126</sup> *SERMPE I*, p. 48.
- <sup>127</sup> *Ibid.*, p. 56.
- <sup>128</sup> *Ibid.*, p. 58.
- <sup>129</sup> S. C. Vidyabhushan, *op. cit.*, p. 133; *Vaṅḡiya Sāhitya Parishat Patrikā*, vol. LVII, p. 68.
- <sup>130</sup> The colophon reads as *saṃvat 1076, Āshāḍha badi 4 Māhārājādhirāja Puṇyāvaloka-Somavamsodbhava—Gauḍadhvaḡa Śrīmad-Gāṅgadeva-bhujyamāna Tīrabhuktau Kalyāṇavijayarājye*, etc. (*Memoirs of the Asiatic Society of Bengal*, no. 5, p. 74).
- <sup>131</sup> *Vaṅḡiya Sāhitya Parishat Patrikā*, vol. LVII, p. 68; *IHQ*, vol. VII, p. 681.
- <sup>132</sup> B. P. Sinha (editor), *The Comprehensive History of Bihar*, vol. I, pt. II, Patna, 1974, pp. 317-319. The names *Gāṅgādeva* and *Gāṅgādeva* have analogues meaning. *Gāṅgādeva* was in a position to attack the Gauḍa king Madanapāla's territory and to claim the title of *Gauḍadhvaḡa*, even if it was a flamboyant title. The expression *Gauḍadhvaḡa* may however be a mistake for *Garuḍadhvaḡa*, as suggested by D. C. Sircar (*JASBL*, 1951, p. 27).
- <sup>133</sup> For examples see *Bhandarkar's List*, nos. 1086, 1097, etc. etc.
- <sup>134</sup> *EL*, vol. XXXII, pp. 331-332.
- <sup>135</sup> *Journal of the Bihar and Orissa Research Society*, vol. XX, pp. 15-19. Two of the copper plate inscriptions referring to the reign of Śivasimha mention the Śaka Era. (One of these refers to Śaka 1321, Sana 807, Vikramasāṃvat 1455 and La Saṃ 293 (?). The second speaks of Śaka 1321 (*Bhandarkar's List* nos. 1126 and 1470). But these copper plates are generally considered spurious.
- <sup>136</sup> *EL*, vol. XXXII, p. 331. One of the manuscripts of the *Tantrapradīpa* of Gaṅgādhara is dated in the Śaka Year 1426.
- <sup>137</sup> R. Sharma, *Coinage of Tripura*, Varanasi, 1980, p. 14.
- <sup>138</sup> The provenance and the present deposition of the copper-plate of Dharmamānikya of the Śaka Year 1380 is not known. It is noticed only in the *Rājamāla* by Kailāśachandra Siṅha (pt. II, ch. 3, p. 39). The date Śaka 1410 is furnished by copper-plate of Puṇyavati (*JASB*, Letters, 1951, vol. XVII, no. 2, pp. 72-82).



- <sup>139</sup> M. M. Sharma, *Inscriptions of Ancient Assam*, Gauhati, 1978, p. 295.
- <sup>140</sup> M. Neog, *Prāchya-Śāsanāvalī*, Guwahati, 1974, p. 1.
- <sup>141</sup> *Ibid.*
- <sup>142</sup> H. Raverty, *op. cit.*, pp. 565; K. L. Barua, *Early History of Kāmarūpa*, Shillong, 1933, p. 213.
- <sup>143</sup> *Journal of the Varendra Research Museum*, 1975-76, vol. IV, pp. 59-61 and pl. 1. Note the forms of the letters *ta*, *dha*, *sa* etc., which seem to be more developed than their known forms of the 13th century A.D., to the early part of which the Śaka Year 1127 belonged.
- <sup>144</sup> Compare M. M. Sharma, *op. cit.*, pl. LXV, second half and *EI*, vol. V, p. 11 facing p. 182 with Tables XVII and XVIII of T. P. Verma, *Development of Script in Ancient Kāmarūpa*, Jorhat, 1976.
- <sup>145</sup> M. Neog, *op. cit.*, pp. 2f.
- <sup>146</sup> *Ibid.*, pp. 21f (of the text).
- <sup>147</sup> *Ibid.*, p. 144 (of the introduction) and pp. 5f (of the text). The Chamadhava rampart inscription of the Śaka Year 1538 belongs to the reign of Svarganārāyaṇa (= Prātāpasīmha) (*ibid.* p. 144 of the introduction). Dates in the Śaka Era began to appear on the Ahom coins from the time of Svarganārāyaṇa (A.D. 1648-63) (*An Exhibition of Indian Coins*, Calcutta, 1974, relevant pages).
- <sup>148</sup> M. Neog, *op. cit.*, pp. 2-4 (of the text).
- <sup>149</sup> R. C. Majumdar *et al.*, *Vāṇīlā Deśera Itihāsa*, Madhyayuga, pp. 477 and 503-504.
- <sup>150</sup> *SERMPEI*, pp. 1f.
- <sup>151</sup> N. N. Acharya, *The History of Mediaeval Assam*, Gauhati, 1984, p. 224.
- <sup>152</sup> J. P. Singh and Nisar Ahmed (editors), *Coinage and Economy of North-Eastern States of India*, Varanasi, p. 49.
- <sup>153</sup> *Ibid.*, p. 38; N. N. Acharya, *op. cit.* p. 227.
- <sup>154</sup> See above nn. 148 and 149. The legend *Śrī-Jayantipura-Purandarasya*... meaning the "illustrious destroyer of the stronghold called Jayantipura" on the earliest of the Jayantia coins may actually refer to Naranārāyaṇa. Its coins of much later dates, well after the end of the Koch supremacy, may be due to mechanical imitation of an earlier legend. However, in the later times, if not at the time of the introduction of the legend, the word *Purandara*, meaning also *Indra*, lord of the gods, might have been used to denote authority over Jayantipura (indicating the relevant king as the Indra or Lord of Jayantipura).
- <sup>155</sup> *JNSI*, 1983, vol. XLV, pp. 70 and 194-5; 1985, vol. XLVII, pp. 131-32. Nirbhayanārāyaṇa might have been a vassal of a Kāmarūpa king at Dimapur. However the capital of the Kachari kingdom might have been transferred to Maibong about this time. So he might have been connected also with Maibong (E. Gait, *A History of Assam*, 2nd edition, Calcutta, 1926, pp. 245-249).
- <sup>156</sup> J. P. Singh (editor), *Coinage of Bengal and its Neighbourhood*, Varanasi, 1980, p. 29; J. P. Singh and N. Ahmed, *op. cit.*, pp. 83f.
- <sup>156A</sup> J. P. Singh and N. Ahmed, *op. cit.*, pp. 83f.
- <sup>157</sup> *JNSI*, 1985, vol. XLVII, p. 131; N. N. Acharya, *op. cit.*, p. 98.
- <sup>157A</sup> E. Gait, *op. cit.*, p. 251; N. N. Acharya, *op. cit.*, p. 199. When the Kachari king defeated by Naranārāyaṇa agreed to pay 70000 silver rupees annually as tribute (Acharya, *op. cit.*, p. 199), the money of Bengal sultans was probably indicated. The Kachari coins betray influence of the coinages of the Koch state as well as of the Sultans of Bengal (J. P. Singh and N. Ahmed, *op. cit.*, pp. 74-75) and perhaps also of the specie of Viravijayanārāyaṇa, whose only published coin is dated in Śaka 1442. According to a reading of his coin-legend, it describes him as 'the destroyer of the power of the Hacheṅgsā (family) (i.e. the Kachari ruling dynasty) (*Indian Museum Bulletin*, 1967, no. 2, p. 26 and pl.). In that case he probably ruled somewhere near the Kachar territory (including Dimapur). However, V. Chaudhury has informed me that the legend on a well-preserved but still unpublished piece the king is described as the "destroyer of the enemies of the Hacheṅgsā (family)". So he might have belonged to that family.
- <sup>158</sup> It was not impossible for the Kachar area contiguous to Harikela (including the Sylhet district) to have some knowledge of the Śaka Era even before its contact with the Koch power. See also above n. 157a.
- <sup>159</sup> N. N. Acharya, *op. cit.*, pp. 199-200.
- <sup>160</sup> J. P. Singh and N. Ahmed, *op. cit.*, p. 103. The date on a variety of the coins of Garib Newaz is written as *Chaitra sudhi (sudi) terase (divase) 2 saṁ 164(0)*. On later coins the era is explicitly called Śaka (*ibid.*, pp. 103f).
- <sup>161</sup> *Ibid.*, p. 112. Chandrābda, also called Manipurābda, was considered to have begun in A.D. 788. A year (1043 A.D. 1831-32) of the Chandra Era occurs on the coins of Gambhīra Śīmha (*ibid.*, pl. VIII, no. 6).
- <sup>162</sup> For examples we can refer to the use of La saṁ (Lakshmanasena Era) in north Bihar, Vaṅgābda in "Bengal", Malla Era in *inter alia* Bankura region of West Bengal, Tripurābda in Tripurā, etc. Beside these the Hijri Era was in regular use in parts of Eastern India in the mediaeval age. In certain areas dates were recorded only or mainly in regnal years during the early mediaeval or proto-mediaeval age (c. A.D. 750-1200).
- <sup>163</sup> *Bhandarkar's List*, nos. 299, 388, 370, 571, 718, 736 (?), 782, 1059, 1126 (?) and 1470 (?); *SERMPEI*, pp. 47, 56, and 58; etc. The Śaka as well as the Vikrama Era probably became well known in the Gayā area of Magadha (*Bhandarkar's List*, nos. 370, 571, 718 and 782; *SERMPEI*, pp. 38, 139 and 143; etc.).
- <sup>164</sup> For an example we can refer to the Biharsharif stone inscription of the Śaka year 1 (3) 17 and the Vikrama year 1452 (*SERMPEI*, p. 47).
- <sup>165</sup> The date and place of the composition of a text mentioned in a later manuscript of it may not be of any help to us, unless the place can be located in the area under review. A manuscript of a treatise may be copied at a place and on a date far removed from those of its original composition.



## APPENDIX I

## A NOTE ON THE OLD ŚAKA ERA

ACCORDING to numismatic evidence Azes I ruled later than the Śaka or Śaka-Pahlava ruler Maues.<sup>1</sup> Hence the year 78, in which the Taxila inscription of Moga (or Maues) is dated,<sup>2</sup> is to be referred to a reckoning separate from and older than the one founded by Azes I. The existence of the older era is supported by other data.

We can here refer to the Taxila silver *askos* inscription of Jihonika of the year 191. The inscription can be read as (Sa)ka 1 (×\*) 100 (+\*) 20 (+\*) 20 (+\*) 20 (+\*) 20 (+\*) 10 (+\*) 1 *maharaja-bhrata* (*Maṇi*)*gulasā putrasa Jihonikasa Chukhsasa Kshatrapasa*.<sup>3</sup>

Kshatrapa Jihonika, son of Maṇigula, seems to have been the same as Kshatrapa Jihonīa or Jihunīa (Zeionises), son of Maṇigula, of a great number of silver and copper coins.<sup>4</sup> Not only Jihonika of the inscription and Jihonīa or Jihunīa of the coin-legends held the same administrative designation and their names can be philologically correlated, but also the name of the father of one was apparently identical with that of the father of the other. Again, palaeographically the Kharoshṭī inscription of Jihonika and the Kharoshṭī coin-legends of Jihonīa can be referred to the same age.<sup>5</sup> Jihonika of the epigraph ruled over Chukhsa, which included the Taxila area.<sup>6</sup> To the north-western part of the Indian subcontinent (including Taxila) we can assign the mints of the coins of Jihonīa.<sup>7</sup> Hence, in the present state of our knowledge, Jihonika should be identified with Jihonīa or Jihunīa (Zeionises).<sup>8</sup>

As Kshatrapa Jihunīa was always a subordinate ruler in parts of the north-western region of the Indian subcontinent,<sup>9</sup> the metrology and the general features of his coinage must have conformed to the contemporary imperial coinage of that area. Jihunīa, as noted above, minted silver and copper coins. Several of his silver pieces, however, contain debased metal.<sup>10</sup> Since the royal Scytho-Parthian silver coinage of the region concerned became debased from the time of king Azes II,<sup>11</sup> these satrapal specie, showing signs of debasement, should be dated after the commencement of his reign. Good silver coins of Jihunīa<sup>12</sup> may, therefore, be placed either in the very beginning of the completely independent reign of Azes II or rather in the period of Azilises, who ruled before as well as with Azes II. The successor of Azes II in the north-western part of the Indian subcontinent was Gondophares I, who struck, *inter alia*, billon coins.<sup>13</sup> He is not known to have struck silver coins in that area. In fact, he could not have profitably minted silver specie in that area, since it had already become heavily debased.<sup>14</sup> On the other hand, Jihunīa minted silver and copper, but not billon. Hence his satrapal rule in the north-western part of the Indian subcontinent should be placed before it came under the control of Gondophares I or at least before the latter struck there his billon pieces. Hence Jihunīa served Azes II and probably also Azilises but perhaps not Gondophares I.<sup>15</sup> This indicates the feasibility of ascribing the inscription of Kshatrapa Jihonika (=Kshatrapa Jihunīa) to a date falling several years before Vaiśākha 3 of the year 103 of the Takht-i-Bāhi record of Gondophares I. At least the year 191 of the record of Jihonika should be placed before the date of the inscription of the year 103.

If the year 191 is to be placed before the year 103, these dates will have to be referred to two different eras, the older one (to which the year 191 should be assigned) having its first year inaugurated at least about (191-103=) 88 years earlier than the initial year of the younger reckoning (to which the year 103 is to be attributed). The year 103 may be referred to the Azes Era, which again may perhaps have been identical with the era of 58 B.C.<sup>16</sup> These inferences would tend to place the beginning of the older era before about (58 B.C.+88=) 146 B.C. We have suggested elsewhere that it began in c. 170 B.C.<sup>17</sup>

The appearance of the word (Sa)ka before the figures for the year 191 in the record of Jihonika may



suggest that at least in the closing decade of the second century of the existence of the reckoning in question it was called the Saka (Śaka) Era.<sup>18</sup> In order to distinguish it from the more well-known Śaka Era of A.D. 78,<sup>19</sup> we may call it the Old Śaka Era.<sup>20</sup>

## NOTES

<sup>1</sup>K.A.N. Sastri (editor), *A Comprehensive History of India*, vol. II, *The Mauryas and Śātavāhanas, c. 325 B.C.-A.D. 300*, Calcutta, etc.; 1957, pp. 197-198; *ASSIPH*, pp. 12, 171-172 and 199f. Of all the Śaka or Śaka-Pahlava rulers of the subcontinent Maues used only Greek legend at least on one class of his coins (*CTSPKI*, p. 1 no. 7). This class of specie, which displays elephant's head and caduceus and the legend *Basileos Maou*, bears very close resemblance to the type and legend of a variety of coins of an early Indo-Greek ruler called Demetrius (I or rather II) (A. K. Narain, *The Indo-Greeks*, Oxford, 1957, p. 52). Other classes of coins of Maues and all types of coins of Azes I bear more presumptuous titles in Greek and Prakrit. Again, the stylistic affinity of the coins of the early Greek rulers of the subcontinent, who certainly reigned earlier than the Azes group, is much more towards the coins of Maues than towards those of Azes I.

<sup>2</sup>*CII*, vol. II, pt. I, p. 28. For newly found inscriptions claimed to be referring to Moga, see A. H. Dani, *Chilas, The City of the Nanga Parvat (Dyamar)*, Islamabad, 1983, pp. 93, 99, 109, etc.

<sup>3</sup>*CII*, vol. II, pt. I, p. 82 and pl. XVI.

<sup>4</sup>*CTSPKI*, p. 24; P. Gardner, *A Catalogue of Indian Coins in the British Museum, Catalogue of the Greek and Scythic Kings of Bactria and India*, London, 1886, pl. XXXIII, no. 11; *PMC*, vol. I, pl. XVI, no. 82.

<sup>5</sup>Compare *CII*, vol. II, pt. I, pl. XVI with *PMC*, vol. I, pl. XVI, no. 82.

<sup>6</sup>*CI*, vol. II, pt. I, p. 82.

<sup>7</sup>The appearance of lion, a well-known local type of Taxila (J. Allan, *A Catalogue of the Indian Coins in the British Museum, Catalogue of the Coin. of Ancient India*, London, 1936, pp. 223-226), on a class of Jihonia's copper coins, displaying lion and bull (*PMC*, vol. I, no. 84), may allow us to attribute these to (*inter alia*) Taxila. One of his reverse types showing a male being crowned by a city-deity has been assigned to Pushkalāvati [E. J. Rapson (editor), *The Cambridge History of India*, vol. I, Cambridge, 1922, p. 588; *ASSIPH*, p. 174].

<sup>8</sup>For arguments against the hypotheses which distinguish Jihonika of the inscription from Jihonia of coins, see *CSADOSE*, p. 42, n. 44.

<sup>9</sup>*ASSIPH*, pp. 173-174.

<sup>10</sup>This inference is based on our examination of a fairly large number of coins of Zeionises. See also *ibid.*, pp. 25-26.

<sup>11</sup>*The Journal of the Numismatic Society of India*, 1960, vol. XXII, p. 69.

A few of the good silver coins of Jihonia were seen by the present author in the Singhi collection of Calcutta. See also

<sup>12</sup>*CCGSKBI*, p. 110; *PMC*, vol. I, p. 157; etc.

<sup>13</sup>*PMC*, vol. I, pp. 146f; *ASSIPH*, pp. 98f.

<sup>14</sup>*ASSIPH*, pp. 223-225.

<sup>15</sup>*CII*, vol. II, pt. I, p. 62.

<sup>16</sup>*ASSIPH*, p. 190.

<sup>17</sup>*CSADOSE*, pp. 61-62.

<sup>18</sup>*Ibid.*, pp. 84-85.

<sup>19</sup>*IE*, p. 258f.

<sup>20</sup>*Ibid.*, p. 86.



## A NOTE ON VAISHNAVITE ĀYUDHAPURUSAS IN MEDIAEVAL KASHMIRI SCULPTURES

BANSI LAL MALLA

### Introduction

IT is well known that Kashmir was a great centre of Buddhist and Brahmanical art and religion in ancient and mediaeval times. Of the different aspects of Hinduism, Vaishnavism and Saivism were more popular than the other cults. It is very difficult, however, to trace the origin and evolution of Vaishnavism in Kashmir. Certain scholars have traced the popularity of Vaishnavism in Kashmir to the sixth century A.D. The *Rājatarāṅgiṇī* informs us about two Vaishnavite temples which were built during the reign of king Lalitāditya.<sup>1</sup> The antiquity of the tradition of Viṣṇu worship in Kashmir is further established by the names of some of the mountains, lakes and places in or around Kashmir and these indicate Vaishnavite connection; for example, a mountain lake in the Pirpanjal range is called Viṣṇupada. Lakes known today as Viṣṇasar, Rāmārādhana and Kṛṣṇasara point to the Vaishnavite connections of the valley.<sup>2</sup> Kashmir was also recognised as one of the most ancient centres of the Pañcarātra system. The popularity of the Vaiṣṇava cult is further established by a reference in the *Viṣṇudharmottara Purāṇa* where it is stated that the valley was a seat of Viṣṇu in the form of *cakrin*.<sup>3</sup>

There is a number of textual references to indicate that numerous kings and queens of Kashmir had accepted Vaishnavism and patronised the sect. Kalhana refers to queen Raṇārambha who had persuaded her husband Rāmāditya to convert a Śaiva temple into a Vaiṣṇava shrine.<sup>4</sup> Jayanta Bhatta in his *Āgamāḍmbara* refers to the Ranasvāmin temple of Viṣṇu.<sup>5</sup> During the reign of the Karkotas both the kings and noblemen patronised the erection of Viṣṇu temples. King Durlabhavardhana, Chandrāpīḍa, Lalitāditya, Jayāpīḍa and queen Kamalāvati and Amṛtaprabhā are known to have patronised the erection of Viṣṇu temples.<sup>6</sup>

The popularity of Vaishnavism reached its acme during the reign of the Utpala dynasty. Avantivarman was a devout follower of Viṣṇu and he is credited with building a temple of Viṣṇu called Avantisvāmin.<sup>7</sup> His minister Suyya founded a Viṣṇu temple called Hṛṣikeśa Yogaśāyin.<sup>8</sup> The period under review, that is, between eighth and ninth centuries witnessed the production of a number of Vaishnavite sculptures at various sites, namely, Bijbehara, Andarkot, Devsar, Avantipur, Verinag etc. Subsequently, Vaishnavism received support from Queen Sugandhā and her daughter-in-law who built the Vaishnavite temples of Gopāla Keśava and Nandikeśava, respectively.<sup>9</sup> Meruvardhanasvāmī, the minister of king Partha, Yaśas-kara, Parvagupta, Bhaṭṭa Phālguna, Sahi king Bhima, and queen Didda etc. also erected Vaishnavite temples.<sup>10</sup> Vaisnavism, however, received its first set-back from king Harṣa in the eleventh century, but his successor, Uccala, again patronised Vaishnavism.<sup>11</sup> The glorious days of Vaishnavism ended with the coming in of Islam into the valley in the fourteenth century.<sup>12</sup>

As narrated above Vaishnavism appears to have enjoyed a position of high reverence for several centuries in Kashmir. Many temples were built and were decorated with Vaishnavite relief sculptures and were ins-





Fig. 1. Viṣṇu with Chakrapuruṣa and Gadādevī, c. 7th cent., from Bijbehara (Anantnag—J&K), Grey limestone, ht. 460 mm., S P S Museum, Srinagar (100/2 B).



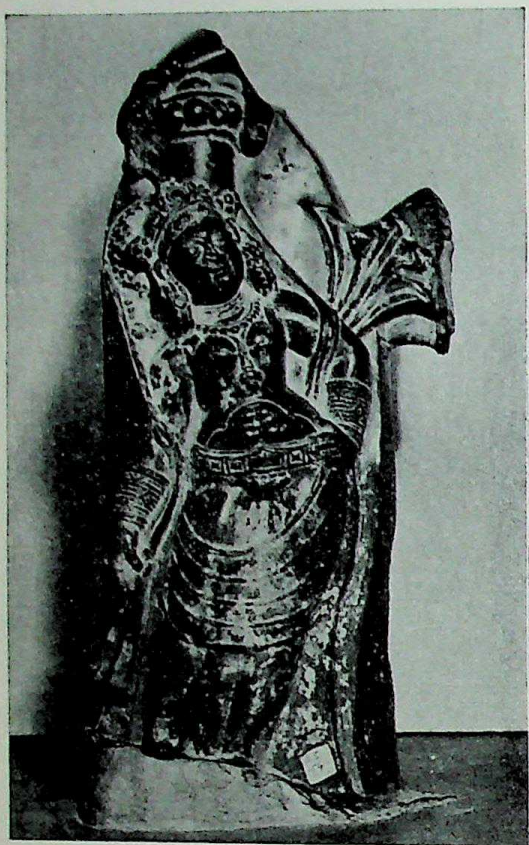


Fig. 2. Gadādevī, fragment of Viṣṇu image, c. 9th cent., from Avantipur (Anantnag—J&K), Fine grained limestone, ht. 390 mm., SPS Museum, Srinagar (A C 27).



Fig. 3. Viṣṇu, c. 14th cent., Grey limestone, ht. 980 mm. from Verinag (Anantnag—J&K), now in SPS Museum, Srinagar (No. C/158).



talled with various aspects of the images of Viṣṇu in stone and bronze. Though the images of Viṣṇu in Kashmir have been dealt with at length, the *Āyudhapuruṣas* have not received so far the measure of attention they deserve. Therefore, it is attempted here to throw some light on this aspect of Vaiṣṇavite iconography and illustrate the distinctive features with some outstanding examples.

### Iconography of *Āyudhapuruṣas* of Kashmir

Before discussing the *Āyudhapuruṣas* of Kashmir, the iconography of the *Āyudhapuruṣas* as described in the different *śilpa* texts may be considered. *Viṣṇudharmottara Purāṇa* describes *Chakrapuruṣa* as a male figure with round eyes and a drooping belly. According to this text *Chakrapuruṣa* should be adorned with various ornaments. The text further prescribes that the image of *Chakrapuruṣa* should be made to look to Viṣṇu, and the lower left hand of Viṣṇu should be shown placed on the head of *Chakrapuruṣa*<sup>13</sup>. Gopinatha Rao has given a detailed description of *Chakrapuruṣa* and other *Āyudhapuruṣas* but he has not mentioned the source of his information.<sup>14</sup>

According to Rao, *Āyudhapuruṣas* should be made in *aṣṭatāla* measure; they should each have only one face with a pair of eyes, the head should be adorned with the *karaṇḍamukula* and each of them should have only two hands held over the chest in the *añjali* pose. When their hands are in the *añjali* pose the particular emblem or weapon, which each of them is intended to represent, is shown over the crown worn on the head, otherwise, the weapon or emblem is placed between the hands.<sup>15</sup>

Some of the Vaiṣṇava attributes are depicted as male while a few are depicted as female. In the case of the latter the gender was determined by the gender of the word that denoted them. Thus the word *gadā* being feminine, the mace was personified as a beautiful woman and was known as *Kaumudakī*, while *śaṅkha*, *chakra* and *padma* were represented as male figures. Sometimes *śaṅkha* is shown as a masculine figure while *chakra* and *padma* are taken as of neuter gender and according to the text they should be shown as eunuchs. But in actual practice *śaṅkha*, *chakra* and *padma* are all three generally depicted as male figures. It would indeed be difficult to depict the hermaphrodite form visually. Curiously enough, Sivaramamurti reported a panel showing *Āyudhapuruṣas* in the Madras Museum in which the *gadā* is represented as a man, not a woman. The texts also refer to the personification of *śakti*, *aṅkuśa*, *pāśa* and *vajra* and their gender was fixed on the basis of the word denoting them.<sup>16</sup> The personified depiction of the attributes is less common than as emblems. The reason for the paucity of personified images of the attributes of Viṣṇu is not known, though there is no injunction against the making of such images.

According to the *Viṣṇudharmottara*, the *gadā* should be personified as a female of yellow colour.<sup>17</sup> She should have slender waist and should be bedecked with various ornaments. She should carry a *chāmara* in her hand and the right hand of Viṣṇu should be shown placed on the head of the *gadā*. The *śaṅkha* should be represented as a white male figure with a pair of pretty eyes. In a comparatively later text, called *Śilpa-ratna*, the *chakra* is referred to as having eight to sixteen arms while Viṣṇu is to be placed within a *ṣaṭkoṇa-chakra*.<sup>18</sup> The personified figures have also been detected in the early and mediaeval sculptures of eastern and northern India. The nucleus of *Āyudhapuruṣas* has been referred to in a square coin of Maues, where the attribute *vajra* appears as a man standing against a double pronged *vajra* and he is shown in front of the enthroned god Indra or Zeus whose right hand is placed on personified *vajra*'s head.<sup>19</sup>

### *Āyudhapuruṣas* in the Sculptures of Kashmir

The images of *Āyudhapuruṣas* are found to occur in Kashmir from about the seventh century A.D. onwards. Such images were found with the single headed Viṣṇu images as well as with the images of the Vaikunṭha aspect of Viṣṇu.<sup>20</sup> The images of *Āyudhapuruṣas* occur both in stone and metal. Curiously enough, of the four *Āyudhapuruṣas*, Kashmir always went for two images only. In almost all images of Viṣṇu or Vaikunṭha Viṣṇu the god is shown flanked on either side by *Gadādevī* and *Chakrapuruṣa*, respectively (fig. 1). There is hardly any image of Viṣṇu which is found to be flanked or attended by *Śaṅkha puruṣa* and



*Padma puruṣa*, *Chakra puruṣa* and *Gadādevī* in Kashmir appeared always as dwarfish figures and their heights are restricted almost to one-third of the main image. The figures of these *Āyudhapuruṣas* are carved in acute flexions. They appear standing either in *ābhaṅga* or *tribhaṅga* postures (figs. 5 and 8). The *bhaṅgas* are, in certain cases, found to have been worked out almost to a breaking point (fig. 5). The images of *Chakrapuruṣa* and *Gadādevī* in Kashmir are characterised by a diagnostic mannerism or idiom. Both these *Āyudhapuruṣas* are always shown two-handed. *Gadādevī* in most cases holds in her right hand a *cauri* and her left shows *chinmudra*.<sup>21</sup> While *Chakrapuruṣa* holds in his right hand a *chāmara*, his left hand is engaged in *kaṭihasta* pose (figs. 3, 4 and 8). But while *Gadādevī* is shown simply holding the *chāmara*, *Chakrapuruṣa* is shown as though waving it with his raised right hand. In the case of *Gadādevī* in Kashmir some novelties are found. In one of such images her left hand is placed on her waist, while with the dangling right hand she supports the end pieces of her scarf (fig. 2). In some cases the attributes which are being personified, are shown either at the top or behind the head of *Āyudhapuruṣas*. In the damaged image of *Gadādevī* (fig. 2) from Avantipur the topmost portion of the *gadā* and the damaged palm of Viṣṇu are noticed on the top of the head of the *Gadādevī*. In the Devsar image of Viṣṇu the discus (*chakra*) is noticed behind the head of *Chakrapuruṣa* (figs. 3, see also fig. 5). But in some of the images the discus at the back has not been properly indicated (fig. 6). As for the costumes and coiffure, the Kashmir *Āyudhapuruṣas* offer certain novel features. In some of the images *Chakrapuruṣa* is shown with matted locks (fig. 7). Images of *Chakrapuruṣa* is also shown with a single pearl necklace (figs. 3 and 4). In some cases the *Āyudhapuruṣas* are shown with long garlands just like the *vanamālā* of Viṣṇu (figs. 5, 7). In some of the images, *Gadādevī* is shown wearing a *śāḍī* which reaches up to her anklet (fig. 8), while in certain cases her lower garments are extended up to her knees (fig. 2). She wears in most cases a three-pronged crown (figs. 7, 8) which reminds one of the typical character of the hill crowns. But there are instances in which *Gadādevī*'s hair has been arranged in a different way and are clasped by an ornamental *tiārā* (fig. 2). It is interesting to note that though some of the *Āyudhapuruṣas* in Kashmir are shown as looking up towards their main god (figs. 3, 5, 8), as prescribed in the text, others are shown looking vacantly towards the front (figs. 4, 6). In some of the Viṣṇu images the bust of a female figure is seen placed between the legs of the deity. She has been identified not as a personified *Āyudha* but as *Bhūdevī*.<sup>22</sup>

Some years ago the National Museum (New Delhi) has acquired a small bronze image (figs. 9-11) of Viṣṇu-Vaikunṭha from Kashmir. Though not of very sharp features, it is observed that far more attention has been paid to the shaping of the heads and common body of Viṣṇu, Varāha, Narasimha and Kapila, respectively, the *Chakrapuruṣa* and *Gadādevī*, as well *Bhūdevī* have received far less care in this complex image. Nevertheless, they conform to the iconography of Kashmir images. *Chakrapuruṣa*, who stands to the proper left of Viṣṇu is in *dvibhaṅga* posture. With his upraised right hand he wields a *chāmara* and his left hand is placed on the thigh. He wears three *hāras*, besides a *vanamālā*. His eyes, made of silver inlays, look up towards the master. He wears a short *dhoti*, indicated by ridged lines, with a waist band clasping it tightly. A three-fold sash runs across the thighs and the ends are tied with a loop at the left. The circular halo around his head is plain at the back, but has a floral decoration as a border on the front face. The lower left hand of Viṣṇu is placed over the edge of the halo. The left foot of *Chakrapuruṣa* is bent at the knee and is slightly pushed forward for convenience of stance.

The figure of *Gadādevī*, stands in *dvibhaṅga* in a manner corresponding with the stance of *Chakrapuruṣa*. Her *jaṭāmukūṭa* is embellished with a bejewelled crown, while the chignon is shown protruding towards the right. She wears a broad pendanted *hāra* with a large floral pendant passing between the breasts and resting on the chest. A bejewelled *kaṭibandha* clasps the tight and short *śāḍī*. She wears a large bejewelled *hāra* and a floral *vanamālā*. With her right hand she holds a mace (*gadā*) which follows the contour of the torso. The left hand is held up in adoration. The ornaments, apart from the *hāras*, comprise heavy ear-rings, beaded bracelets and bangles. The eyes are made of inlays of silver. The right hand of Viṣṇu rests on the flange of the otherwise plain halo, immediately above the *jaṭāmukūṭa*.

*Bhūdevī* is shown between the two legs of Viṣṇu, as though emerging from the ocean, from where she had been rescued by Viṣṇu. Two handed, she is attired in the same manner as *Gadādevī* and has also a



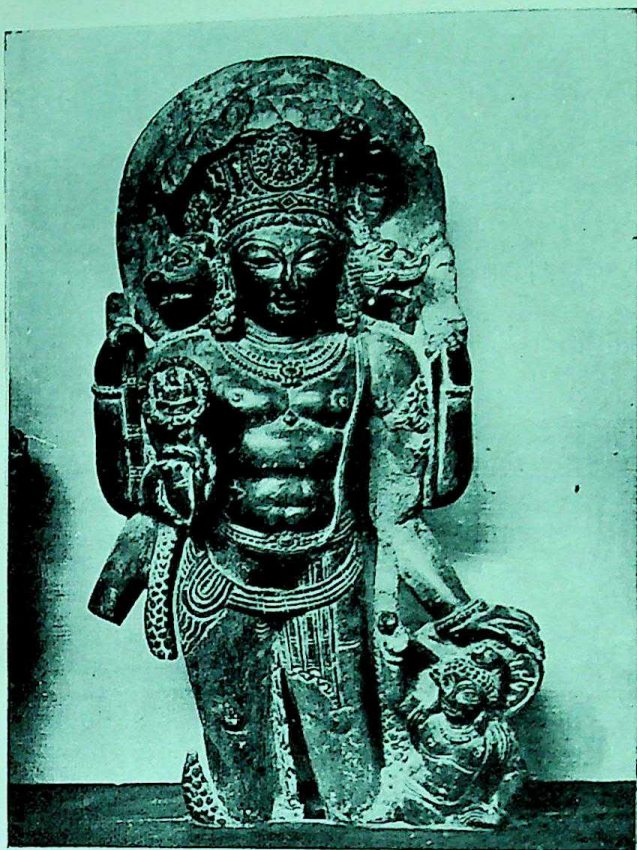


Fig. 4. Vaikuntha, *c.* late 9th—early 10th cent., from Verinag (Anantnag—J&K), Dark grey limestone, ht. 580 mm., now in S P S Museum, Srinagar (No. 163).

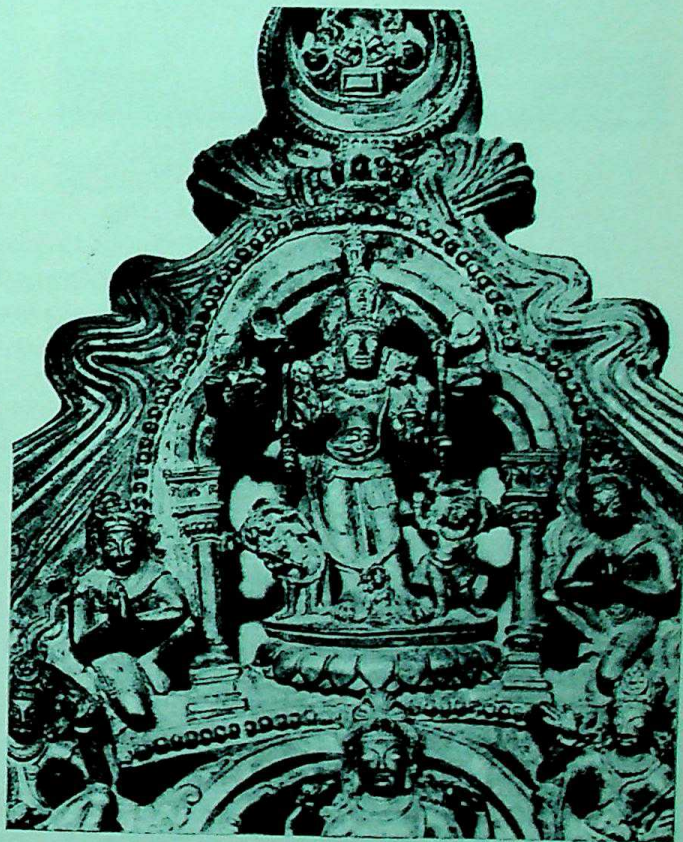


Fig. 5. Image frame, detail Viṣṇu and devotees, *c.* early 10th cent., from Devsar (Anantnag—J&K), Brass (silver eyes), ht. 215 mm., now in S P S Museum, Srinagar (No. 2661).





Fig. 6. Vishnu, Vaikuntha, c. 12th cent., from Verinag (Anantnag—J&K). Grey limestone, ht. 685 mm., now in S P S Museum, Srinagar (No. 164).

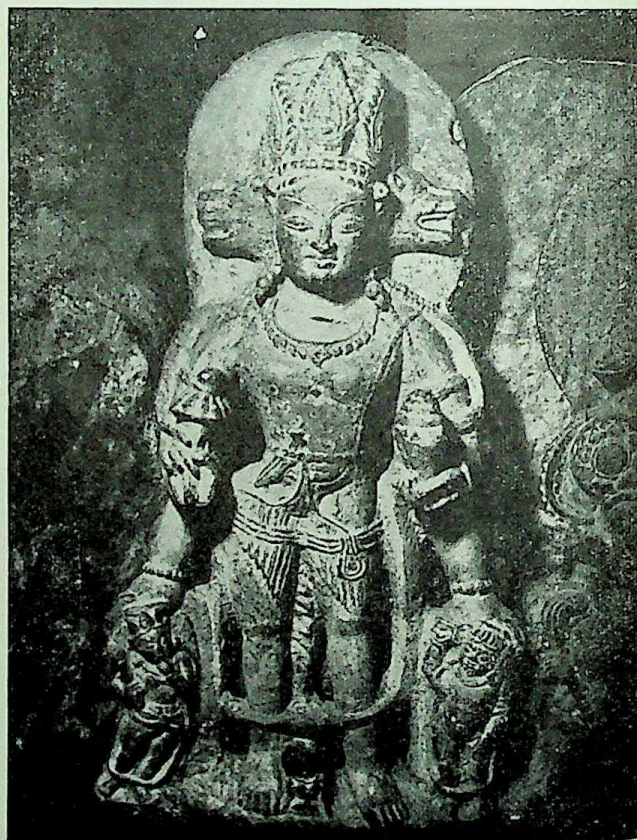


Fig. 7. Vishnu, Vaikuntha, c. 13th cent., from Verinag (Anantnag—J&K). Grey limestone, ht. 690 mm., now in S P S Museum, Srinagar (No. C/151).





Fig. 8. Vishnu, c. 14th cent., Grey limestone, ht. 980 mm., from Verinag (Anantnag—J&K), now in S P S Museum, Srinagar (No. C/158).

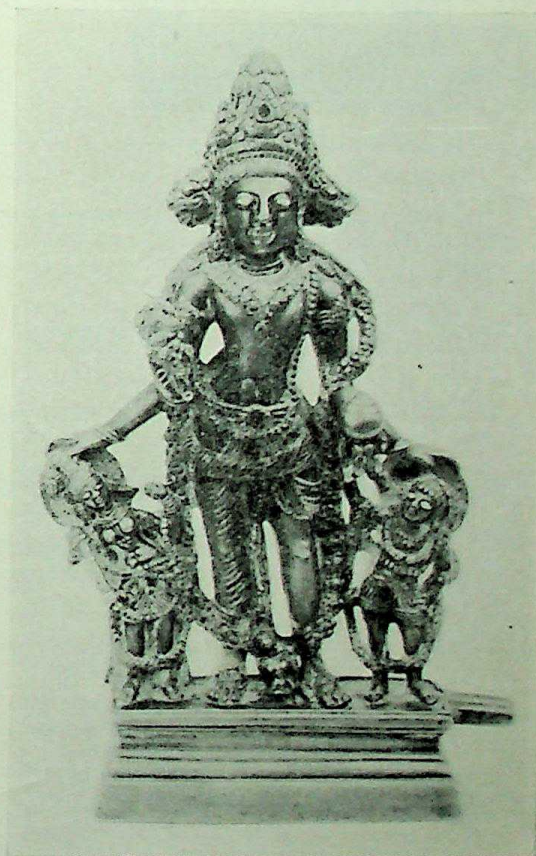


Fig. 9. Bronze figure of Vaikuntha Vishnu, c. 8th cent., from Srinagar, now in National Museum, New Delhi.





Fig. 10. Details of *Chakrapuruṣa* as shown in Fig. 9.

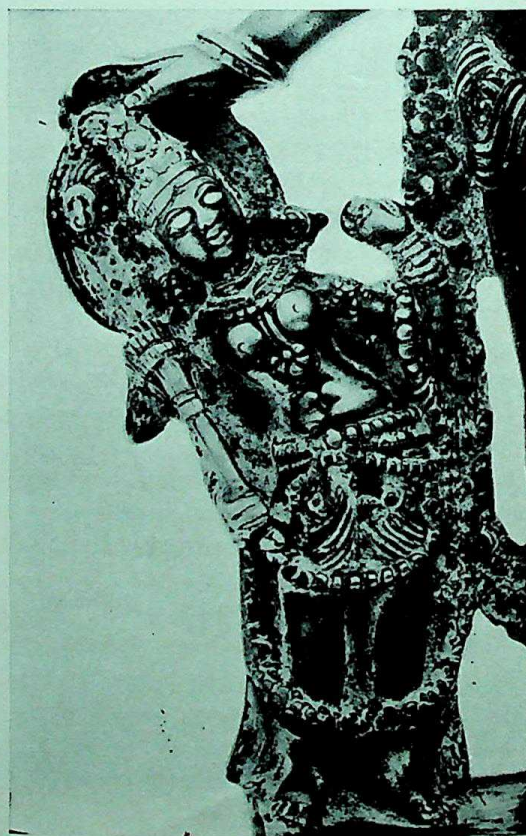


Fig. 11. Details of *Gadādevī* as shown in Fig. 9.



similar *hāra* with a pendant. The right hand is raised upward, while the left hand follows the contour of her left side. The body is bent towards the right, suggesting a *dvibhaṅga* form.

This bronze sculpture shows the typical sculptural style of personified weapons of Viṣṇu, as well as the figure of *Bhūdevī* prevailing in Kashmir.

### Conclusion

The study of the *Āyudhapuruṣas* reveals one factor beyond any doubt, that the artists paid careful attention to the curving of the main images and tried to bring out the beauty of the image as best as they could in comparison to the images of the accompanying *Āyudhapuruṣas*. The figures of *Āyudhapuruṣas* were given comparatively less attention in their execution and final finish and are found to be rather coarsely and summarily treated. Nevertheless, the *Āyudhapuruṣas* of Kashmir have diagnostic features of their own as discussed above and these distinguish them from the *Āyudhapuruṣas* of the other regions of India,<sup>23</sup> though they derive support from common *śilpa* texts as seen above.

### REFERENCES

- <sup>1</sup>*Rājatarāṅgiṇī* (Eng. Tr. by Stein) Vol. I, Book IV. pp. 272-274; see also Kumari, Ved, *The Nīlamata Purāṇa* (vol. I), Jammu, 1968, p. 158.
- <sup>2</sup>Bamzai, P. N. K., "History of Vaiṣṇavism and Kṛṣṇa Cult in Kashmir", *Journal of the Oriental Institute*, Vol. XXX (1980-81), p. 214.
- <sup>3</sup>*Viṣṇudharmottara Purāṇa*, III. 125. 10; see also Kumari, Ved, *The Nīlamata Purāṇa* (Vol. I), Jammu, 1968, p. 158.
- <sup>4</sup>*Rājatarāṅgiṇī* (Stein tr.) Vol. III, pp. 453-454; Bamzai, P. N. K.; *op. cit.*, p. 216.
- <sup>5</sup>Ray, S. C., "Studies on the History of Religion in Ancient Kāśmīra", *The Journal of Bihar Research Society*, Vol. XLI (II), p. 189, *vide* also *Āgamaṇḍambara* (Act IV). Kalhana also refers to a visit paid to Ranasvāmin by king Cakravarman's queen—*Rājatarāṅgiṇī*, Vol. V. pp. 394.
- <sup>6</sup>*Rājatarāṅgiṇī* (Stein tr.) Vol. IV. pp. 6, 79, 183 & 188, 208, 659 respectively.
- <sup>7</sup>*Ibid.*, Vol. V, p. 45.
- <sup>8</sup>*Ibid.*, Vol. V, p. 100.
- <sup>9</sup>*Ibid.*, Vol. V, pp. 244-245; Ray S. C., *op. cit.* p. 192.
- <sup>10</sup>*Rājatarāṅgiṇī* (Stein tr.), Vol. V, pp. 267-268, Vol. VI. pp. 140-142, Vol. VI p. 178., Vol. VI. pp. 299, 300-302, also see Ray, S. C., *op. cit.* p. 192.
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- <sup>19</sup>Banerjea, 'Hindu Iconography'. *Journal of the Indian Society of Oriental Art*, Vol. XIV (1946), p. 72.
- <sup>20</sup>An image of Viṣṇu with Cakrapuruṣa and Gadādevī, dated 7th cent. A.D., *vide* fig. No. 1.
- <sup>21</sup>A number of images of Gadādevī in Kashmir are endowed with this *mudrā*; see fig. Nos. 6 and 8.
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## A FRESH APPRAISAL OF BHARHUT\*

R. C. SHARMA

THE architectural remains of Bharhut preserved in the Indian Museum, Calcutta enjoy a unique position in the history of Indian plastic art. For the Śuṅga period art and society these truly serve as mirror. Ample light has been shed on the significance of this antiquarian treasure ever since it was exposed in 1874 and shifted en bloc to the Indian Museum, the following year. The monographs of the excavator Alexander Cunningham<sup>1</sup>, B. M. Barua<sup>2</sup> and Arabinda Ghosh<sup>3</sup> are of foremost importance for appreciating the beauty and value of this rich material. The first study presents an archaeological approach, the second one highlights the Buddhist background and the third furnishes some interesting interpretations of the 'decorative' relics. N. G. Majumdar's Guidebook (Part I) also furnishes a good record of the Bharhut collection.<sup>4</sup> Besides, several other scholars<sup>5</sup> and art critics have been presenting their observations as the discussion of Bharhut remains is inevitable for the study of Indian art and architecture.

The present paper, however, aims at highlighting only those few aspects which have either escaped the attention of the pioneers or have not been dealt with so adequately as their importance demands or little more elaboration seems justified for their proper estimation.

### Svastika Shape

The railing which is the main attraction of the *stūpa* assumes the shape of the *Svastika* (mystic cross, fig. 1) through return railing to avoid direct approach to the monument for its safety from the wild animals. This was a happy blend of technology with religion and spiritualism. Had there been only the problem of protection of the complex, it would have been solved through other means and devices. The second (outer) railing which was small, simple and plain furnished an answer after some time.<sup>6</sup> The master planner who first conceived the design of the *stūpa* did not confine himself to the architectural details but he seems to have gone deep in identifying the complex as a place of highest spiritual elevation. The very first step into it assures the divine bliss *Svasti*. It was the symbolic manifestation of religious attainment for devotee and the planner has magnificently transformed it into the architectural pattern.

The question still remains to be answered is as what was the original source of the concept of the scheme of the *Svastika*? The symbol is very popular in the early Indian sculptural and terracotta art and is also seen on the punch marked coins, assignable to several centuries B.C. It had gained a wide popularity as in the three major creeds *viz.*, Brahmanism, Buddhism and Jainism, this motif finds a conspicuous place.

To find the exact source of its origin we have to trace the background of the evolution of the *stūpa*. It is held that the idea of *stūpa* and *chaitya* evolved from the Vedic *yajña*.<sup>7</sup> In pursuance of the same tradition the phenomenon of *Svastika* also seems to have emerged. *Svastivāchana* in Vedic recitation and *Svāhā* frequently pronounced in the Vedic sacrifices must have been in the root in shaping the *stūpa* as a large *Soastika*. Regarding the shape of the *stūpa* it may be observed that its pattern follows the anti-clock treat-

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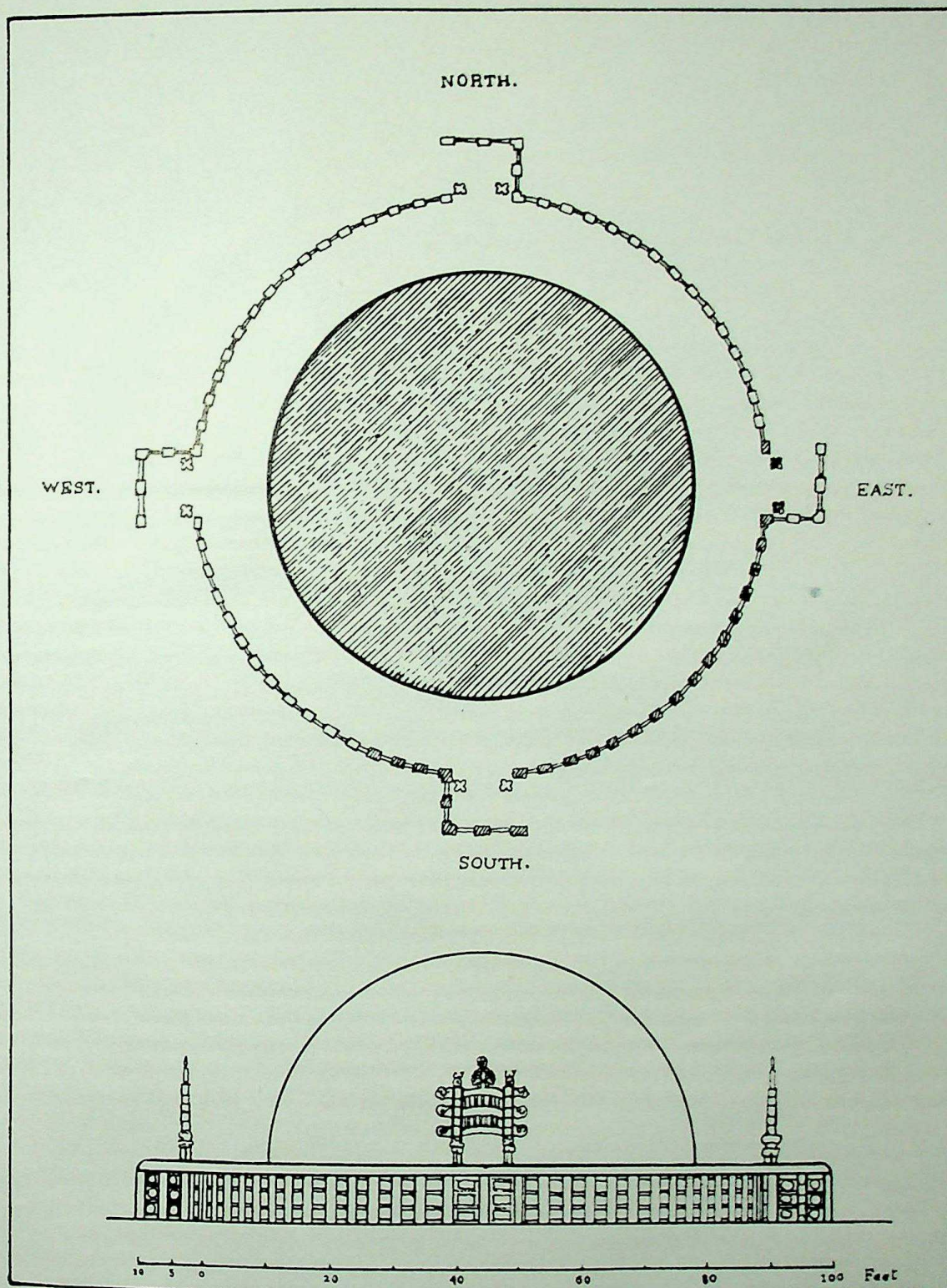


Fig. 1. Plan of Stupa





Fig. 2. Isisinga Jātaka (Accn. No. 225)



ment (*Vāmāvarta*) which stands for lunar or feminine energy and not clockwise trend (*Dakṣiṇāvarta*) which represents the solar or masculine force.<sup>8</sup>

### Mahādeva Pillars

The recovery of two fragmentary stone pillars of different dimensions than those of the regular pillars of the main railing of the *stūpa* suggests the possibility of an outer railing which according to Cunningham was put up subsequently to protect the *stūpa* complex including the beautiful railing carved with several scenes and *Jātaka* narration. The outer railing was simple, plain and smaller in size. The whereabouts of these two important finds are unfortunately not known now.

But the issue which concerns us is not the shape or size of this rather conjectured outer railing but the Brāhmī epigraph which reads as:

1. (BA)HU HATHIKA ĀSANA—
2. (BHA)GAVATO MAHĀDEVASA—

*i.e.* 'The diamond seat of many elephants of Lord Mahādeva' if word Hathika is accepted to mean elephant. If Hathika means hands it should be translated as 'the diamond seat of many hands of Lord Mahādeva. Lūders translates it as 'The seat Bahuhathika (where there are many elephants) of Mahādeva.'<sup>9</sup>

This may be pointed out here that the figure of elephant and a row of human hands on the lower border are the distinguishing features of carving. The word ĀSANA of course means the seat which according to Cunningham should be taken to be the *Vajrāsana* (diamond seat of the Buddha).

BHAGAVATO MAHĀDEVASA has naturally been explained as referring to the Buddha in the context of the Buddhist *stūpa*.<sup>10</sup> Barua thinks that the two pillars under reference should not belong to the outer railing but may be the Return Posts. He further admits that the inscription 'distinctly refers to a representation of the Buddha's seat guarded and worshipped by many elephants'.

We venture to review the translation and the interpretation of these two pillars on the following grounds. Firstly these do not form the part of the main Bharhut *stūpa*<sup>11</sup> and the conjecture of a second railing just on the basis of such stray finds seems to be a far fetched hypothesis. These might have constituted the part of some other shrine in the vicinity and subsequently shifted to the *stūpa* complex for some use. The nature of this shrine may not necessarily be Buddhist.

We further propose to translate the inscription as 'Of Lord Mahādeva, who is master of many elephants'. Śiva is known as Paśupati and his association with elephant is well-known. The epithet 'Bahuhathika' does not appear to be relevant for the Buddha but it applies well for Śiva. Similarly epithet 'Mahādeva' does not appear to be appropriate for the Buddha but it is one of the synonyms of Śiva. Of course the presence of the Buddha has often been conceived through elephant and the figure of the elephant at Dhauli<sup>12</sup>, Girnar<sup>13</sup> and Kalsī<sup>14</sup> installed by Aśoka do label them as '*Gajātama*' *i.e.* the best elephant. But in such cases only one elephant is carved with honour and he naturally represents the Buddha, reminding the dream of Mahāmāyā before the birth of Siddhārtha. But the word 'Bahuhathika' *i.e.* many elephants connotes entirely a different meaning and it may not be so conveniently interpreted for the Buddha as for Śiva.

Under the circumstances explained, it seems justified to argue that the two stray pillars not fitting with the main Bharhut complex might have belonged to some other shrine which was Śaiva in nature. Alternatively some devotee of Śiva might have donated these pillars for the great *stūpa* complex. The possibility of interaction between the two religions cannot altogether be ruled out as sometimes we find different



faiths flourishing simultaneously at one place and Mathura can be cited as an important example. Bharhut is situated on the high road between Ujjain and Śrāvastī, the former being the famous Śaiva seat and the latter a Buddhist establishment where the Buddha performed several miracles. It may also be recalled that the Śaiva cult was already popular in the pre-Christian centuries both in human and symbolic forms. The inscribed Panchamukha Śivaliṅga from Bhita, Allahabad<sup>15</sup> now in the State Museum, Lucknow and the other *liṅga* from Gudimallam<sup>16</sup> in Tamilnadu, are representatives of both the aspects. Association of some Śaivas with the Buddhist holy places seems quite probable.

### Source of Story

The scenes represented on the railing generally narrate the Buddhist stories. But there are several stories which owe their origin to the other popular or non-Buddhist sources like Pañchatantra.<sup>17</sup> Similarly the *Jātaka* scenes like Isisinga (fig. 2), and Daśaratha are nearer to the *Rāmāyaṇa* than to the Buddhist chronicles. The *Rāmāyaṇa* story was well-known before the composition of *Jātaka* tales and their rendering on the Bharhut railing. It would be interesting to note that the Bharhut rails depict several other divine or semi-divine sculptures which are not essentially Buddhist in nature. *Gajalakṣmī* (fig. 3), *Garuḍadhvaja* and a lady with Viṇa (fig. 4), identified as the earliest prototype of Sarasvatī<sup>18</sup> are some of the important citations. We should, therefore, have an open and unbiased mind while interpreting the sculptural depiction in the Bharhut or any other early monument. The process of assimilation between one sect and the other has been the binding force of the society and it has amply reflected in the early Indian Art. The approach of some scholars like Barua to explain all sculptures of Bharhut through Buddhist texts only, has been challenged by Lüders.<sup>19</sup>

### An Open Air Exhibition

The *stūpa* of Bharhut is of utmost significance for the students of art history and museums. This can be interpreted as the earliest open air museum or art gallery imbibing several essential characteristics of exhibition. Labelling of scenes (fig. 5) is the most important part of it. Like the modern Museum concept the planners or designers of Bharhut aimed at the dissemination of knowledge, preachings or message among the masses. They were also introducing some new versions of canons or stories and to make them popular, it was deemed necessary to label the scenes.

This may be pointed out here that not all scenes in Bharhut are captioned (fig. 6) and this has led some scholars to suggest that Bharhut belonged to a transitional phase, when the practice of label writing was either losing ground or becoming optional.<sup>20</sup> But the fact is that we do not find the earlier examples of captioning the scenes except the three elephants at Kalsi, Dhauli and Girnar as mentioned above.

The most plausible explanation appears to be that the important, new or less popular narrations were provided with labels for proper identification and the scenes with which the public was familiar remained uncaptioned. Another reason for this lapse seems to be that the sculptors were not always scribes and those who were not conversant with the art of writing left the scene for label writing by others but such occasion never came. On the basis of the label writing formula this may be presumed that by the time of Bharhut the Buddhist canons were not finalised and their collection, compilation and editing were in process.

Anyway, whatever may be the clue of this mystery, the label writing was an important phenomenon, introduced in Bharhut and it has shaped the *stūpa* complex into an open air exhibition. It is a happy coincidence that this earliest sculptural exposition is housed in the earliest museum of the country.

### Mason's Mark

Some sculptures of Bharhut bear single alphabet which is explained as mason's mark. Cunningham opines<sup>21</sup> that the fragments bearing Arian (Kharoshthī) letters (*p*, *s*, *a* and *b*) display superior workman-



ship of carving and these must have been executed by the alien (Western) sculptors who were probably employed to shape the finer and more imposing parts such as capitals. The observation is based on the presumption that the engravers put their marks (probably figures) in the script which was known to them. Such marks have been noticed in other place also and these have been considered as initials of sculptor or monograms.<sup>22</sup> The mason's marks incised in Brāhmī script in Bharhut were naturally put by the local sculptors. Thus both foreign and Indian artists or skilled masons worked hand in hand at Bharhut. It is for this fact that certain foreign trends have percolated in the *stūpa* complex. A figure of a foreign soldier is quite conspicuous in this respect (fig. 7).

### Nature's Role

An important characteristic of Bharhut sculptures is its very close affinity with nature. Although it does stand on the foundation of the Mauryan art in different ways<sup>23</sup>, but in depiction of nature, Bharhut is unparalleled. The variety of lotus flowers, exquisitely carved scrolls undulating creepers issuing from full vase (fig. 8) or Yakshas, trees, bushes etc. present a feast to the eye. The animals and birds have also been rendered in abundance and these being integral part of the composition emerge as co-actors with men. It may further be noticed that only the benevolent aspect of nature has been presented before the spectators and this is amply corroborated by trees profusely laden with fruits. The nature culminates into supernatural form when it miraculously emits rich ornaments and garments (fig. 9).

Thus it was not only the human being who could long to attain the highest goal and divine bliss through its pious deeds but every part of nature seems in process of transformation into divine form. This mystery or occult power of nature has been unfolded by the sculptor of Bharhut in a very subtle form. Reaching this stage of zenith the nature naturally commanded a greater respect and reverence. Bharhut artist, therefore, deemed it proper to present it not only as means but also an object of worship. The Buddha was conceived in different form of nature such as Bodhi tree, elephant, lion, horse, bull, deer etc. In his former births (*jātakas*) also he remained closely associated with nature. Nature is the source of merry making and entertainment of society and it inspired most of the legends narrated on the Bharhut rails.

Unfortunately, the divine message and grace of nature as conveyed by the art of Bharhut in the Śuṅga age was forgotten in the subsequent period and the anthropomorphism started dominating to such an extent that nature almost disappeared from the scene and it merely served as decorative theme or mount of the human being. A sense of respect and reverence for nature is found diminishing after the great art of Bharhut and it was really an irreparable ethical and spiritual loss. The nature has not been able to bear with the ruthlessness of man and it seems to have withdrawn its cordial and benevolent role.

### Chastity of Treatment

The sculptures of Bharhut represent the vergin grace and chastity of artistic expressions. The beauty is seen in its true natural form with no overtones or imposition. It is devoid of amorous and erotic overtures and the voluptuous bosoms. Suggestive and attractive looks and inviting gestures have not yet emerged.<sup>24</sup> Instead, the woman folk seems to have played a simple and innocent role. Unconcerned with exposing their physical charm they form the part of the large plethora performing the assigned task, worship or rituals to earn charity.

Alternatively, belonging to the divine class they are adorable in form of Yakshīs (fig. 10) or Devatās (fig. 11). It is probably at Mathura that the sculptor starts revealing the secrets of feminine charm.<sup>25</sup> In Bharhut the cupid remains calm, subdued and restrained despite a topless exposition of the fair sex. The Bharhut beauty seems to have remained untouched and undisturbed by the sensuous emotions<sup>26</sup> but on the contrary it is expressive of purity, chastity, grace and divinity.



### Buddha in Shaping

Our eyes were caught by a fascinating scene carved on a coping stone of Bharhut and its significance was highlighted during the course of our study of the Buddhist art<sup>27</sup>. A medallion of a big undulating creeper (fig. 12) represents an ascetic almost in *padmāsana* (cross-legged position). Sitting under a tree he holds his right hand in the preaching posture and the left hand rests on the knee. Four young men (devotees or disciples) are seen before him either listening to the discourse or reading a scripture or recording something as their hands are half raised. Three of them sit in profile and we have the back view of the fourth who faces the tree. They are seated on the ground while their master occupies a higher pedestal.

The epigraph on the top reads DĪGHATAPASI SISE ANUSĀSATI which has been translated by Cunningham as Dirghatapasi instructs his female disciples.<sup>28</sup> There seems no justification of identifying them as female students. They are undoubtedly young and handsome but the hair style looking like a tuft (*jūdā*) is actually the loosely tied up matted hair. The pupil seen from the back also has the matted hair and sits in a stiff masculine posture. It is, therefore, not proper to identify them as female disciples.

The inscription also leaves no ground for the presumption of accepting them as girl students. There is no word which could be translated or explained like female. It is simply mentioned as SISE meaning student. The mistake committed by Cunningham and followed by Barua in translating the caption was rectified in some of the subsequent works.<sup>29</sup>

But the real issue which draws our attention is the word DĪGHATAPASI which as also opined by Lüders does not appear the name of the sage but his epithet<sup>30</sup>. It seems to qualify his long sacrifice or pious deeds and as such he is to be identified carefully. The whole composition of scene reminds us of the episode of the first sermon of the Buddha to his first five disciples at Sārṇāth. We had once felt the presence of the fifth pupil also in the medallion under discussion<sup>31</sup> but the close look does not permit us to sustain this observation.

The fact, however, remains that there is a great resemblance between this scene and the first sermon of the Buddha. Owing to the canonical interdictions it was not possible to represent him conspicuously at Bharhut and the credit of his anthropomorphic rendering soon went to Mathura and Gandhāra.<sup>32</sup> But the Bharhut sculptor who carved this medallion seems to have every intention to project the human figure of the Master who attained the Buddhahood after several years of sufferings and sacrifices, *Dirghatapasyā*, hence his epithet as DĪGHATAPASI is quite appropriate. In the light of these observations the Dighatapasi of Bharhut may be the Buddha in shaping and the scene may be the prototype of the first sermon.

There are some other scenes which require a more convincing interpretation and a fresh appraisal.

### Better Setting

While the zeal and noble efforts of scholars in salvaging, restoring and highlighting the glory of Bharhut are commendable, the present setting of Bharhut remains in the Indian Museum, Calcutta hardly does any justice with this great artistic wealth. It is inadequately displayed in a comparatively cramped gallery and cannot be properly appreciated by the visitors or art historians. It is hoped that it finds a suitable spot with better conditions of projection in the near future.

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Fig. 3. Gajalakshmi (Accn. No. 177)





Fig. 4. Lady with Vīṇa  
(Saraswati)  
(Accn. No. 243)



Fig. 5. Presentation of Jetavana monastery by Anathapindaka  
(Accn. No. 156)



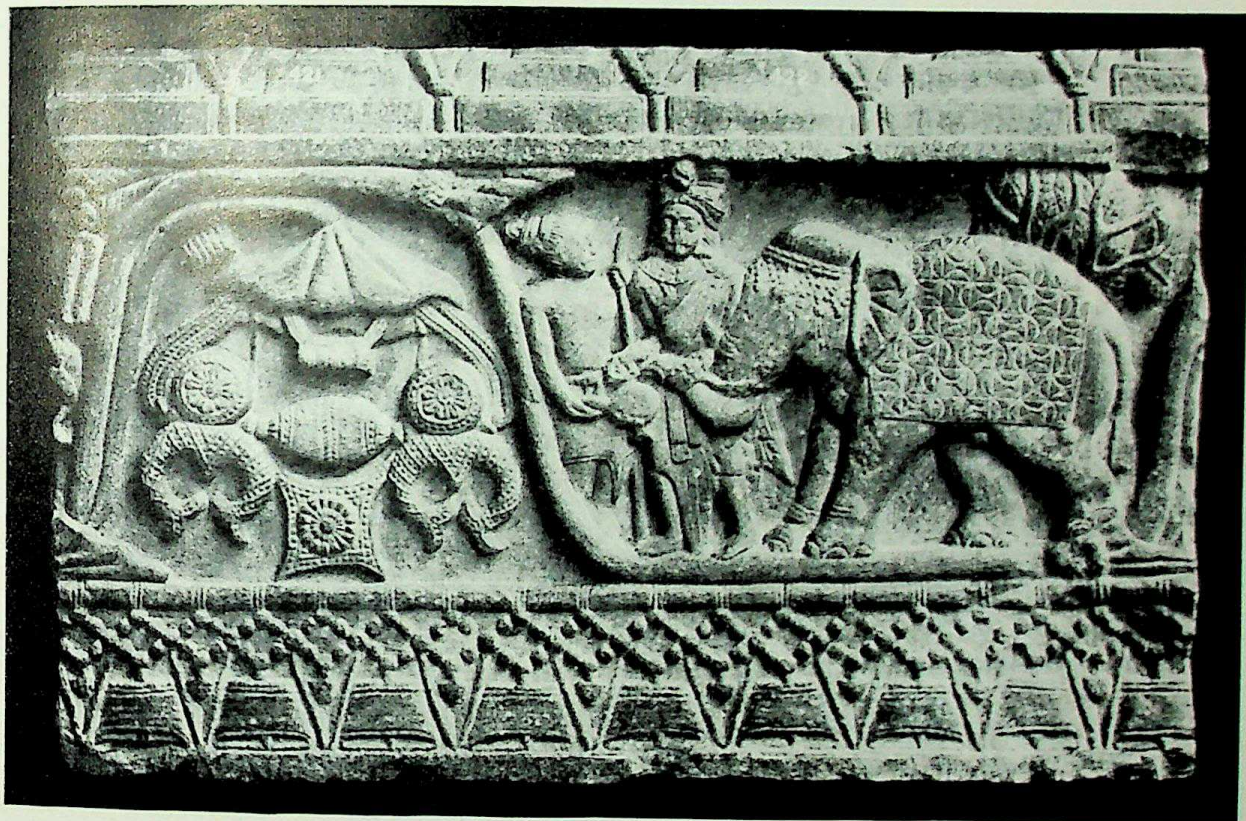


Fig. 6. A scene without label (Accn. Nos. 421, 422)



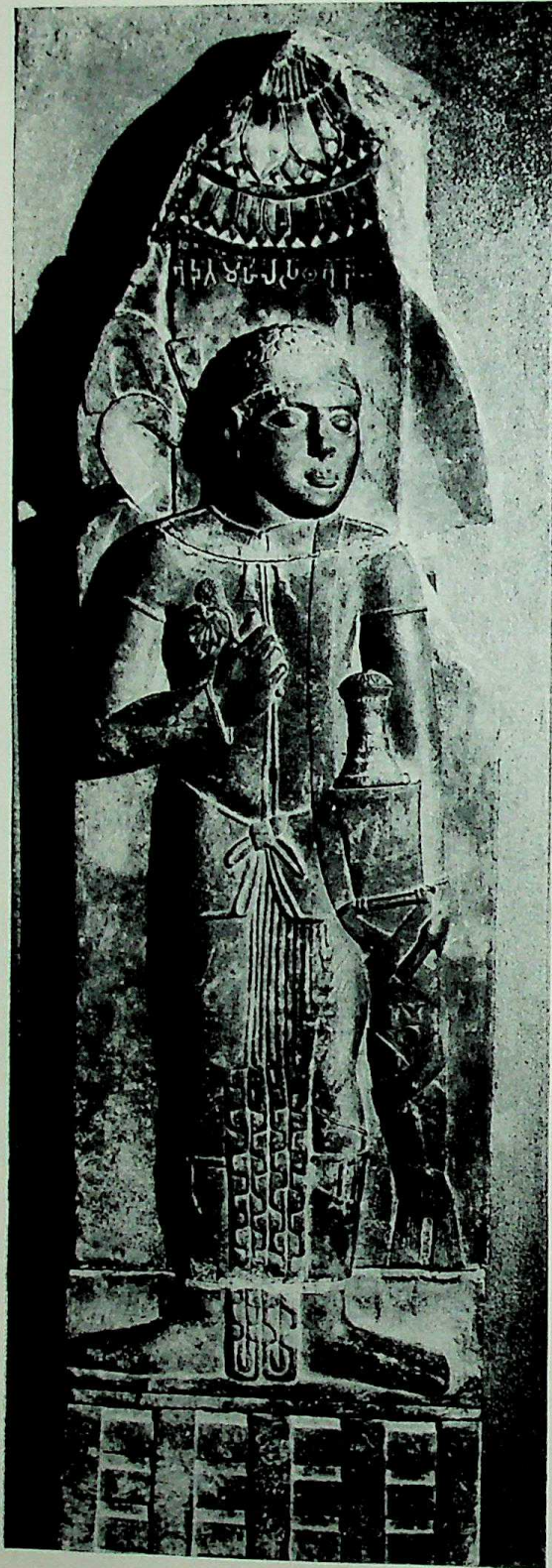


Fig. 7. A foreign Warrior (Accn. No. 12)





Fig. 8. A lotus scroll issuing from vase (Accn. No. 90)





Fig. 9. Trees or creepers issuing garments etc. (Accn. Nos. 334, 335)



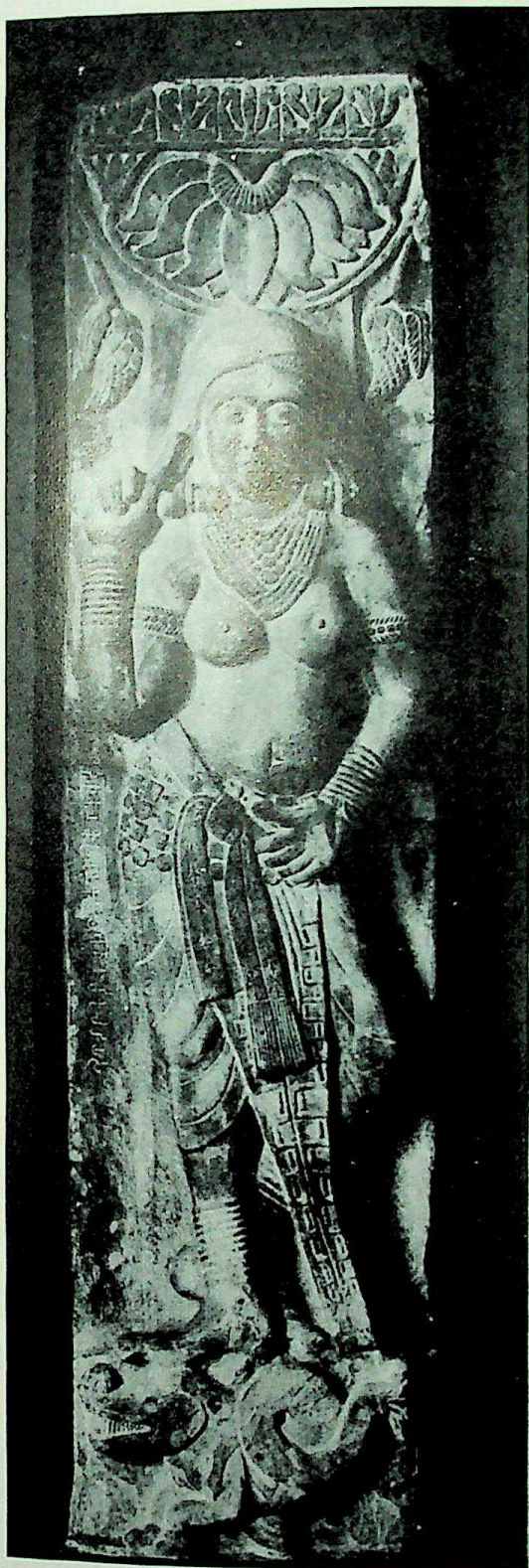


Fig. 10. Sudarśanā Yakshini (Accn. No. 43)



Fig. 11. Sirima Devatā (Accn. No. 141)





Fig. 12. Dighatapasi instructs his disciples (Accn. No. 358)



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## ERAS AND SYSTEM OF DATING IN EARLY AND MEDIAEVAL RECORDS OF ORISSA

SNIGDHA TRIPATHY

THE rise and fall of numerous ruling families throughout the chequered history of ancient and mediaeval Orissa coincided with the history of the various systems of dating and the use of different eras in this part of our country. The earliest historical period, *i.e.* from the decline of the Mauryan supremacy up to atleast the rise of the Gupta power in Orissa during about 5th century A.D. suffers from many limitations and is obscure at many points. The literary as well as epigraphic records, which are considered to be valuable sources to know the system of dating, are not only meagre but also obscure and do not help us much to add to our knowledge in this regard. To know the system of dating which was apparently followed in the earliest historical period in Orissa, we are to depend upon the Vedic literature and a few epigraphic records that are available as it is also known to have been continued in the subsequent periods of history.

The antiquity of the Indian modes of reckoning time indicating the year, month, season etc. can be known from the hymns of the *Rgveda*. The most ancient year probably was calculated according to the movement of the Sun and the Moon through the heavens which is corroborated by one of the hymns<sup>1</sup> in the *Rgveda*. It describes the Sun's "annual course through the heavens as twelve-spoked wheel, the 360 days with as many nights are called his 720 children". This is also differently described in another hymn as "the felloes are 12, the wheel is 1, 3 are the axles within it are collected 360 spokes".<sup>2</sup> Here the spokes are taken to be the number of days, the three axles as the three seasons, *viz.* summer, rain and winter, and the 12 felloes representing the twelve months comprising a year. The calculation of intercalary or the thirteenth month known as *adhimāsa* was also known during the age of the *Rgveda*<sup>3</sup>. The *Tajurveda* also furnishes us with the information regarding the calculation of fortnights called *paksha* due to the movement of the Moon through heavens in the reckoning of lunar months, occurrence of seasons etc.<sup>4</sup> The conception of three seasons comprising a year, each season consisting of four months was thus already popular during the Vedic age. This is still continued to be called *chāturmāsi* which is taken to be the three seasons or the four-monthly periods of a year, each ending with the full-moon *tithi* (*pūrṇimānta*) of the months of Āshāḍha, Kārttika and Phālguna. According to the popular tradition, summer season consisted of the *pūrṇimānta* months of Chaitra, Vaiśākha, Jyāishṭha and Āshāḍha; the rainy season, of Śrāvaṇa, Bhādrapada, Āśvina and Kārttika; and the winter season, of the months of Mārgaśīrsha, Pausa, Māgha and Phālguna. In a later period, the seasons were often counted as six. According to *Amarakosha* (c. 7th century A.D.), they are as follows: 1. *Vasanta* or *Madhu* consisting of the months of Chaitra and Vaiśākha; 2. *Grishma* or *Suchi* = Jyāishṭha and Āshāḍha; 3. *Varshā* or *Nabhas* = Śrāvaṇa and Bhādrapada; 4. *Śarat*, = Āśvina and Kārttika; 5. *Hemant* or *Sahas* = Mārgaśīrsha and Pausa; 6. *Śīta* or *Śīsira* = Māgha and Phālguna<sup>5</sup>. The season of *Vasanta* was also sometimes regarded as consisting of Phālguna and Chaitra instead of Chaitra and Vaiśākha and other seasons were counted accordingly, as is the practice at present in Orissa as well as in other parts of India.



The earliest epigraphic records of Orissa bear no date. Sometimes a particular year of the reign of a king is found mentioned. However, the reckoning of *chāturmāsi* is known to have been in vogue during the Mauryan supremacy from the Special Kalinga Edicts of Aśoka at Jaugada in which instructions have been issued to the *Mahāmātras* of Samāpā, that it should be heard on the *Tishya* day every four-monthly season.<sup>6</sup> Besides, the fifth Pillar Edict of Aśoka furnishes information relating to the calculation of *chāturmāsi* and different *tithis* of the lunar months followed during the Mauryan rule<sup>7</sup>. In the earlier instances, specification of a day in the dates is not found. Only the regnal reckoning of the reigning king is mentioned in words. The Hātigumphā inscription of Khāravela (c. 1st century B.C.) describes the events of the king's thirteen years of reign in Kalinga, specifying each year (*abhisitamato cha padhame vase*) "during the first regnal year of the installed (king)".<sup>8</sup> The Bhadrak inscription of Mahārāja Gaṇa (c. 3rd century A.D.) is dated in the eighth regnal year of the king.<sup>9</sup> The number of years mentioned in this inscription is shown by numerical symbol. It may be noted in this context that the number of years etc. in the earliest records, e.g., the inscriptions of Aśoka and Khāravela were written in words. The practice of writing numerical symbols for years etc. seems to have become popular in a later period as elsewhere in India. Another peculiarity relating to the nature of dating is the use of abbreviations in the epigraphs in connection with dates. The word *samvatsara*, meaning 'the year' has been contracted into *saṁ* in the inscription of Mahārāja Gaṇa mentioned above.

The Māthara dynasty of Kalinga who held sway over the whole of the southern part of the Ganjam district in Orissa and the Srikakulam district of Andhra Pradesh during about the 4th and 5th centuries of the Christian era, are known to have followed different systems of dating from their inscriptions. Some of their copper plate grants are dated in the reckoning of *chāturmāsi* with reference to the specific fortnight of the season. Thus the Koroshanda grant of Viśākhavarman (c. 5th century A.D.) is dated in *samvat* 7 *hema* 7 *divasa* 20, "20th day of the 7th fortnight of the winter in the king's 7th regnal year"<sup>10</sup>. The Bobbili plates of Chaṇḍavarman<sup>11</sup> is dated in the "5th day of the second fortnight of summer in the 4th regnal year of the king." Similarly, the Baranga grant of Nandaprabhañjanavarman is dated in "the 13th day of the first fortnight of summer in the 15th regnal year of the king."<sup>12</sup> Māthara records are dated both in words as well as numerical symbols for the year, number of *tithis* etc., though the use of abbreviations, such as *saṁ* for *samvat*, *śūdi* for *śukla dina*, *va di* for *vaḥula dina* are occasionally met with. The practice of abbreviating the month, the year etc. while quoting the date is also found in the records of other royal families of the same period and in the subsequent period<sup>13</sup>. The system of dating with references to specific fortnight of a season is not to be found in the epigraphs after 5th century A.D. The Mātharas seem to have followed this system of dating from the South Indian ruling families of earlier times, such as the Śātavāhanas, the Ikshvākus etc.<sup>14</sup> But majority of their records and of their times are dated in the regnal reckoning of the respective rulers along with the lunar month and the *tithi* or the lunar day, indicating the popularity of the system of dating according to the *Pūrṇimānta* system of calculation, i.e., the month ending in the full-moon or lasting from *kṛṣṇa* 1 (dark fortnight) to *śukla* 15 (bright fortnight). The early Eastern Gaṅgas of Kalinganagara (present Mukhalingam in the Srikakulam district) during about 7th and 8th centuries are known to have followed the *Pūrṇimānta* system in dating their records.<sup>15</sup>

The early medieval epigraphical records of different royal families of Orissa show the popularity of the practice of writing the number of years, the *tithi* etc. in numerical symbols. The numerals were written by symbols in the earlier inscriptions and this practice seems to have continued till about 10th century in Orissa. Thus the copper plate records of the Vighraha dynasty<sup>16</sup>, the Bhauma-Karas<sup>17</sup>, the early Eastern Gaṅgas<sup>18</sup>, and some of the feudatories of the Bhauma-Karas like the Bhañjas,<sup>19</sup> the Śulkis, the Tuṅgas etc. show the prevalent practice of using numerical symbols in dating. But some of these ruling families such as the early Eastern Gaṅgas, the Bhañjas of Khinjalimaṇḍala and Khijjiṅgakotṭa and subsequently the Somavarṇis<sup>20</sup> have also used the decimal system of writing numbers with the figures from 1 to 9 and the cypher with the application of the principle of space value, and which continued to be used after about 10th century in Orissa and now considered to be most convenient system for writing numbers all over the world.



The early and medieval epigraphs of Orissa do not very often mention the date in detail and in many cases, it becomes difficult to find out the equivalents in known calendars. Gifts were generally made on auspicious occasions such as the eclipses of the Sun and the Moon, the full-Moon and the new-Moon days, the Sun's movement from the south to the north or *vice versa* which are known as *Uttarāyana* and *Dakṣiṇāyana*, the vernal and autumnal equinoxes, the holy *tithis* and particular positions of the planets etc., and these were considered to be auspicious and often clearly indicated in the copper plate records. For the purpose of verification of dates, one requires some knowledge about the nature of the years, months etc., calculated in Orissa in the past.

From about 6th century A.D., the Orissan epigraphs show the use of the calculation of both the lunar and solar months and indicate the beginning of a year which was counted from the month of Kārttika, Chaitra, Āshāḍha or Śrāvaṇa. The twelve signs of Zodiac which are called *rāsis*, viz. (1) Mesha (2) Vṛsha (3) Mithuna (4) Karkāṭa (5) Simha (6) Kanyā (7) Tulā (8) Vṛśchika (9) Dhanus (10) Makara (11) Kumbha (12) Mīna were also names applied to the 12 solar months, although the names of the lunar months, such as Vaiśākha etc. are also very often applied to them. The Sun's passage from the beginning of Mesha to the end of Mīna is known as a *saura-varsha* or *saṁvatsara* (a solar year), the length of which is regarded as 365 days, 15 *ghatikās* or *daṇḍas* (1/60th part of a day), 31 *palas* and 30 *vipalas*, although slight differences of opinion sometimes prevail among the astronomers on this point and for this reason almanacs of different calculations of reckoning are in use in Orissa. The Sun's passage from the beginning to the end of a *rāsi* is called a *saura-māsa* or the lunar month and its entry into a new *rāsi* is called a *saṅkrānti* or *saṅkramaṇa*. In Orissa, the day on which the *saṅkrānti* falls is generally counted as the first day of the solar month while in Bengal, the day following the *saṅkrānti* is regarded as the first day of the month. This difference in the calculation regarding the occurrence of *saṅkrānti* in different parts of our country leads to considerable difference in the almanacs of various parts of the country. The solar month of Mesha, the beginning of the solar year in Orissa is also known as Vaiśākha. A solar month is generally counted between 29 and 32 days and counted from 1 to 29, 30, 31 or 32 without reference to a *tithi* or lunar day (one-thirtieth part of the whole lunation) of the dark or bright fortnight. But the different *tithis* are also counted for the observance of particular functions, specially when the use of both the lunar and solar months are prevalent. The system of dating both in the lunar and solar reckonings is to be noticed in the early copper plate records found in Orissa, the earliest of which is the Sumaṇḍala plates of the time of Pṛthivivigrahabhaṭṭāraka<sup>21</sup>, the grant was made on the occasion of the *Uttarāyana* (the summer solstice) which fell on the eleventh *tithi* of the dark fortnight of the month of Māgha. This luni-solar character in the system of dating in Orissa seems to have been prevalent since considerably an early age. According to the luni-solar system of reckoning the lunar days or *tithis* regulated by the movement of the Moon and having considerable religious importance, are made equal to the solar year in the areas following solar system of reckoning. A lunar *tithi* is not counted until the occurrence of a *saṅkrānti*, i.e., the Sun's entry into a *rāsi* and the lunar month having no *saṅkrānti* is called *adhika* or *mala* month and the lunar month witnessing two *saṅkrāntis* is regarded as *kshaya* or *nija* month. Besides, there are references to *yogas* and *karaṇas* in the dates mentioned in the literary texts as well as inscriptions, particularly of the medieval Orissa. The earliest reference to *yoga* is found in the Andhavaram plates of the early Eastern Gaṅga king Indravarman of the Gaṅga year 133 (A.D. 631). The *yoga* called *vyatipāta* on which occasion the land grant was made.<sup>22</sup> The later Gaṅga inscriptions of 13th and 14th centuries and those of the Sūryavarmanśis of 15th and 16th centuries as well as various literary records<sup>23</sup> of their times frequently mention various names of *yogas* and *karaṇas* along with month *tithi* etc. The *yogas* are used with reference to the astronomical association of the movements of the Sun and the Moon whereas the *karaṇas* each of which indicates half of a *tithi*. The epigraphical records of Anantavarman-Choḍagaṅga and of his times frequently mention the *yoga* named *vyatipāta* also as *mahā-vyatipāta*, though many of these calculations have been proved defective, as it has been noticed that *yoga* did not occur on that date mentioned.<sup>24</sup> A votive inscription of the time of Choḍagaṅga in the temple of Madhukēśvara<sup>25</sup> mentions the *yoga* named *pṛīti*. Inscriptions of Choḍagaṅga and his successors are invariably dated in the Śaka era and the luni-solar reckoning and majority of their inscriptions mention the names of the solar month along



with the lunar *tithi*. The coronation of Vajrahasta III is mentioned in the system of luni-solar reckoning as it mentions the *lagna* along with the solar month, the lunar *tithi* in the Śaka era.<sup>26</sup> The coronation took place when the Sun entered into the Vṛsha-rāśi and the *nakshatra* was Rohiṇī, the month was Dhanu of the bright fortnight on the third *tithi* and on Sunday.

The earliest epigraphs of Orissa do not mention the name of the week-days. The conception of a week of seven days has been generally believed to have borrowed by the Indians from the Greek astronomers and named after the *grahas* or planets. The seven days are named after seven out of nine *grahas* with one or more synonyms, which are as follows: (1) the Sun (Ravi, Āditya etc.) (2) the Moon (Soma, Chandra etc.) (3) Mars (called Maṅgala, Bhauma etc.) (4) Mercury (Budha etc.) (5) Jupiter (called Bṛhaspati, Suraguru etc.) (6) Venus (called Śukra, Daityaguru etc.) and (7) Saturn (called Śani, Śaniaśchāra etc.). The earliest Orissan inscription to refer to the name of a week-day is the Daspalla charter of Rāṇaka Śatrubhaṅja of the Bhaṅja dynasty of Kṛiṅjalimaṇḍala, dated in the Bhauma era 198 (A.D. 934)<sup>27</sup>. The year of the record is given in the decimal figure whereas the Bhauma copper plate grants, dated in the Bhauma era are expressed in numerical symbols. The Bhaṅjas of Kṛiṅjalimaṇḍala were ruling under the Bhauma-Karas in the northern Ganjam region. The use of decimal figures in this region in the 9th and 10th centuries, instead of the use of numerical symbols was popular as is evidenced from several copper plate grants of the early Eastern Gaṅgas of Kaliṅganagara<sup>28</sup> as well as the Gaṅgas of Śvetaka who are known from some of their copper plate grants to have adopted the Bhauma era.<sup>29</sup> But the use of the name of week-day does not appear to be much popular in Orissa as we occasionally come across the name of a week-day in early medieval records, though the earliest Indian epigraph to use the name of a week-day belongs to about 5th century A.D.<sup>30</sup> The above Daspalla plate is dated in the luni-solar reckoning, on the occasion of the Vishuva-*saṅkrānti* which occurred on the 5th *tithi*, Sunday and the *nakshatra* was Mṛgaśira. The name of *nakshatras* or lunar mansions, regarded 27 in numbers on which the full-moon occurs in each of them, are rarely found in early medieval records. But they are frequently quoted along with the week-days from about the beginning of 11th century A.D. with the advent of imperial line of the Gaṅga dynasty.

The system of expressing numbers in Sanskrit words was one of the interesting features usually noticed in the works like astronomy, mathematics etc. in dating the records. In the early astronomical and arithmetical works which were generally composed in verses mention different words indicating the numbers. Sometimes more than one word in Sanskrit were used to indicate the same number. Thus the 'hand' with its term in Sanskrit such as *kara*, *bāhu*, 'the eye'—*netra*, *lochana*, etc. came to be used to imply 2, since man has two hands, two eyes etc. All the Sanskrit words denoting the 'moon' came to be used to indicate 1. This number is also used to indicate the earth and thus the number used to imply *śaśin*, *Indu*, *Vidhu*, *bhū*, *kṣiti*, *dharā* and many other words implying the number have been used in the epigraphic records and the ancient Indian literary works.<sup>31</sup> The principle of *ankānām vāmato gatiḥ* (the movement of the numerals from right to left) was generally followed in the dates expressed in inscriptions in word numerals. Dates expressed in this system in epigraphs and literary works became popular in Orissa from about the last part of the 11th century. The inscriptions of the Gaṅgas of the imperial line from the time of Vajrahasta V very frequently mention the date of the records in Śaka era expressed in chronograms or words which gives a metric value to the passage. The Srikakulam grant<sup>32</sup> of Vajrahasta records the date in Śaka era expressed in words, e.g., *viyad-ritu-nidhi-saṅkhyāyām yati śakābde* in which *viyad*=0, *ritu*=6 and *nidhi*=9 and since the words are arranged according to the *vāma-gati* principle they give the year as 960 of the Śaka era. There are, however, a few exceptions noticed in the Gaṅga inscriptions and of their times where the *vāma-gati* principle has not been followed.<sup>33</sup>

A peculiar system followed in the dating of the regnal years of the Gaṅga and the Gajapati rulers is noticed in their inscriptions and the literary works of their times. Regnal years were calculated in the *Anka-śrāhi* system, which seems to have been introduced by the Imperial Gaṅgas though it cannot be precisely said when the method was first started. The word *śrāhi* (regnal year) is found in many inscriptions



Choḍagaṅga and the earliest use of the word is to be found in the Mukhalingam inscription of Vajrahasta V in which both the regnal year of the king as well as the corresponding year of the Śaka era have been mentioned.<sup>34</sup> But it may be noted that the word *Aṅka* for regnal year is not to be found in the Gaṅga epigraphs whereas the Sūryavamśis who followed this *Aṅka-śrāhi* system, used both the words in the sense of regnal year of the ruling authority. The system which is also popularly known as *Aṅka-chakra* (cycle of *Aṅka* years) and according to which system in the calculation of the regnal years of the king, the numbers 1 and 6 and all the numbers ending with 6 and zero except 10 were not counted. The *Aṅka* year was usually counted from the 12th day of the bright fortnight of the month of Bhādrapada, the day being popularly known as *Sunīā*. But, in case a king died in the midst of the year, *i.e.*, before the *Sunīā* day the second *Aṅka* or the first regnal year of his successor was counted from the day of his accession, ending with the 12th day of Bhādrapada that followed. Sometimes, three *aṅka* years were counted between the last regnal year of the deceased ruler and the second and third *aṅkas* of his successor. Thus in order to know the actual regnal year of a king's 49 *aṅka*, one has to deduct from it the years 1, 6, 16, 20, 26, 30, 36, 40, 46, *i.e.*, 9 years and it will come to 40 years. The Gaṅga inscriptions from the time of Choḍagaṅga bear ample testimony to the use of this system of reckoning their regnal years during the 12th century A.D. which seems to have been borrowed by the Sūryavamśis in the subsequent age. The system became so much popular that it came to be used not only in the official records but also by the poets and writers and by the village astrologers in preparing horoscopes. But the Gaṅgas do not seem to have strictly followed the system, *i.e.*, counting of regnal year from each *Sunīā* day. Though Choḍagaṅga actually ruled for 70 years, his last *śrāhi* seen in his inscriptions is 72 instead of 85.<sup>35</sup>

The dates found in the early records of Orissa point to the absence of the custom of dating royal documents in the years of an era and also to the non-existence of any popular era in the earliest historical period in Orissa. Some scholars, however, believe in the existence of Maurya era starting from the 4th century B.C. Their belief is based on a wrong reading and interpretation of a passage in the Hāti-gumphā inscription of Khāravela. The dated records of ancient Orissa do not, however, have any trace of the use of this era in the inscriptions of the subsequent period. It may be noted that many of the early medieval ruling families dated their records in regnal years, even when the use of an era was quite popular in their neighbouring territories. The Matharas (*c.* 5th century A.D.), the Śailodbhavas (*c.* 8th century A.D.), the Somavamśis (*c.* 9th and 10th century A.D.) followed the practice of dating their charters in the regnal reckoning, though some of the eras were then popular in different parts of Orissa. Introduction of a historical era is noticed in Orissan epigraphs only during the later half of 6th century A.D. with the use of the well-known Gupta era. The epoch of the Gupta era is generally believed to have started in 319-20 A.D. and the years of this era are believed to have commenced on Chaitra *sudi* 1 and the months were regarded as *Prūṇimānta*. The era is also believed to have been instituted not in one day by any sovereign of the Gupta dynasty of Northern India, but the regnal reckoning of an early independent king of the family seems to have been continued by his successors and which became automatically popular as an era and the said ancestor of the later Gupta kings came to be known as the founder of the era, without proclaiming it himself. The year or the reckoning of the Guptas mentioned in the epigraphic records as *Gupta-kāla*, *Gupta-rājyākāla*, *Guptābda* became popular and widespread with the expansion of the Gupta empire and also of their sphere of cultural influence. We have several epigraphic records dated in this era which was in use in Orissa even after the decline of the Gupta power in Northern India. The Gupta years in the Orissan epigraphs though became popular in later ages of the Gupta rule, however, suggest that luni-solar reckoning was adopted here. The earliest mention of the Gupta era is found in the Sumaṇḍala plates of the time of Pṛthivivīgraha-bhaṭṭāraka.<sup>36</sup> The grant was issued on the occasion of the *Uttarāyaṇa* which fell on the eleventh *tithi* of the dark fortnight of the month of Māgha in the year 250 when the Gupta empire was *varttamāna* (still existing). The corresponding date of the inscription in the Christian era would thus be 569-70 A.D. The era was continued by the viceroys and the feudatories of the Guptas and also by some of their successors claiming the status of their imperial predecessors till at least first half of the 7th century A.D., as known



from a number of copper plate records of Orissa.<sup>37</sup> Śaśāṅka of Gauḍa who has been generally taken to be the political successor of the Guptas in Bengal and Orissa and his feudatories seem to have continued to use the era in dating their records.<sup>38</sup>

The early Eastern Gaṅgas of Kalinganagara used to date their records in an era till about the advent of the Imperial Gaṅgas. The initial year of the era is now generally taken to have commenced during 496-98 A.D., though controversies prevailed among the scholars on its commencement.<sup>39</sup> The earliest date found in this era is 39 corresponding to 517 A.D. One of the copper plate grants issued in the Gaṅga year 520 in the reign of the Eastern Gaṅga king Devendravarman, son of Anantavarman and another issued in the reign of Anantavarman, dated in the Śaka year 917, both belonging to the Kadamba chief Dharmakheḍi, son of Bhīmakheḍi of the Kadamba family, who were matrimonially related to the Gaṅgas have been of great help to solve the problem relating to the epoch. Anantavarman of both the records being identical and the Śaka year corresponding to 995 A.D. being some years earlier than the Gaṅga year 520, it could be possible to determine the initial year of the Gaṅga era sometime during the end of 5th or the beginning of the 6th century A.D. On the basis of the dates recorded in these two copper plates R. Subba Rao<sup>40</sup> fixed 494-95 as the initial year of the era, while V. V. Mirashi<sup>41</sup> suggested on the basis of astronomical data that it commenced on *Amānta* Chaitra *śudī* 1 in the expired Śaka year 420, i.e., the 14th March, 498 A.D. But it may be pointed here that the early Eastern Gaṅga records dated in the Gaṅga era, the system of reckoning of lunar months has been followed. Some scholars refer to the reckonings of Gaṅga-Kadamba era and Tumburu-varṇśa era as two different eras from that of the Gaṅga era, which are quoted in grants of Indravarman<sup>42</sup> and Dharmakheḍi<sup>43</sup>. But the belief is based on wrong assumption, as we know that the Kadambas were feudatories of the Gaṅgas. The use of the Gaṅga era was discontinued from about the time of Vajrahasta III who ascended the throne in 1038 A.D. From this period onwards frequent use of Śaka era is noticed in the Gaṅga records, very often expressed in chronograms. The use of Śaka era was unknown in Orissa before 11th century A.D.

Among other obsolete reckonings mention may be made of what is known as Jupiter's Twelve-year cycle, also called *Bārhaspatya-māna* which is occasionally met with in the epigraphs of 5th century A.D. The Simhipura grant of the Māthara king Anantavarman<sup>44</sup> is dated in his regnal year when the *mahā-śvayuja-samvatsara* was current. The earliest occurrence of the reckoning in North and South India has been traced from about 5th century A.D., and particularly noticed in the epigraphic records of the Parivrajaka kings of Central India and a few records of the Kādambas of about the second half of the 5th century A.D. The reckoning is associated with the movement of the planet Jupiter. The year is named after the lunar months such as Chaitra etc. and the *nakshatra* in which Jupiter enters. The word *mahā* is invariably used as a prefix to the names of month indicating the years of the cycle, e.g., mahā-Chaitra, Mahāśvayuja<sup>45</sup> etc.

We find a few references to the *Yugābda* or the fabricated reckoning called *Kali-yuga* era in the medieval epigraphs as well as literary works. The Polasara grant issued by Arkeśvaradeva<sup>46</sup>, probably a feudatory of the Imperial Gaṅgas and who was a chieftain of Hiṅgulā-kaṭaka in the Ganjam district, is dated in Yugābda 4248, corresponding 1148 A.D. Śātānanda Ācharya's *Bhāsvati*, an astronomical work and the earliest literary work written in Orissa in 1099 A.D. is dated both in Śaka era and Yugābda expressed in chronograms.<sup>47</sup> It is believed that the *Kali-yuga* era was fabricated by the astronomers and its beginning is counted from the 18th February, 3102 B.C.<sup>48</sup>

The rulers of the Bhauma-Kara dynasty<sup>49</sup> of Tosala and Utkala who ruled a territory extending from the Mahendra mountain in the south to the southern Midnapore district in the north, introduced an era of their own which is now known as Bhauma-samvat, although the name of the dynasty is not to be found along with the dates mentioned in their inscriptions. Several feudatory rulers owing allegiance



to them, such as the Bhañjas of Khiñjalimaṇḍala (Ganjam region), and of Khijjiṅgakotṭa (Mayurbhanj region), the Tuigas of Yamagarttā-maṇḍala, the Śulkis of Kodālaka-maṇḍala and the Nandodbhavas of Airāvattamaṇḍala (the last three royal families ruled in the Dhenkanal-Angul region) also used this era in their epigraphical records. There is still a lot of controversy regarding the initial year of this era. The Bhauma-Karas who ruled for more than two centuries and introduced the era which probably coincided with the first regnal year of the first king of the family. The earliest year, so far known is *samvat* 54 and the latest known *samvat* is 200. Though some of the copper plate grants of the feudatories of this dynasty probably refering to this era beyond this last known year which is based on wrong reading of the numerical figures.<sup>50</sup> But it is not unlikely to believe that the era was continued for sometime by the feudatories owing allegiance to this dynasty even after their decline, as the same practice is known from the use of the Gupta era in Orissa. The initial year of the Bhauma-Karas according to the late D. C. Sircar is 831 A.D. based on astronomical as well as data collected from the chronological history of the contemporary royal families of Orissa such as the Bhañjas of Khiñjalimaṇḍala and the Somavamśis of Dakṣiṇa-Kosala.<sup>51</sup> But his arguments in support of the chronological history of the Somavamśis and the Bhauma-Karas contradict with the known facts, dates and events of history which have now come to the notice of the scholars. On the basis of the details of astronomical data along with the Bhauma year mentioned in two of the Bhañja copper plate grants<sup>52</sup> as well as certain corroborative facts of Orissan history, such as RājendraChola's invasion of Orissa sometime before 1021 A.D. and Choḍagaṅga's occupation of the coastal area in Orissa, coinciding with the identification of the Somavamśi contemporary Janamejaya I *alias* Svabhāvatuṅga, father of the Bhauma queen Pṛthvīmahādevī instead of Yajāti I, the initial year of the Bhauma era has now been taken to be 736 A.D.<sup>53</sup> It is to be noted that in almost all the grants of the Bhauma-Kara family, the years of this era have been expressed in numerical symbols whereas few of the records of their feudatories have been dated in this era expressed in decimal figures.

Some scholars on the basis of some wrong reading and interpretations of a number of copper plate records and coins have suggested the existence of the fabricated reckonings like the Jain Nirvāṇa era, the Buddhist Nirvāṇa era, the Māna era etc. in Orissa.<sup>54</sup> There is however, no evidence to prove such an assumption.

The reckoning called Jupiter's Sixty years cycle<sup>55</sup> which is known to be one of the current reckonings, is frequently met with in the late medieval epigraphs, particularly in southern Orissa, though it is rarely found in earlier inscriptions. The almanacs in Orissa also very often refer to this reckoning along with its equivalent current eras, *e.g.*, Śaka and Vikrama-*samvat*. The earliest record to refer to this reckoning is a copper plate record issued by Sāmantavarman of the Śvetaka branch of the Gaṅga dynasty which is dated in the Bhauma era with the name of the year as *Vibhava*.<sup>56</sup> Several copper plate grants found in the Koraput district, mostly sale deeds written in Oriya language of the later part of 17th century are dated in this reckoning.<sup>57</sup>

The Sūryavamśi king Kapilendradeva seems to have initiated an era which is to be found in the annual almanacs<sup>58</sup> counted usually since the accession of this king in 1434 A.D. The *Mukundābda* was counted from Śaka 1482 (A.D. 1660), *i.e.*, from the accession of Mukundadeva of the Bhoi dynasty, the last independent Hindu ruler of Orissa which has become obsolete now, whereas *Kapilābda* is still used specially in the almanacs.

Besides the above obsolete and current reckonings found to have been used in the early and medieval epigraphs as well as literary records of Orissa, the Hijri era was introduced here after the Mughal occupation (1590-1751) which is called *Sana* or *Dillīśvarābda* and used in the almanacs and official records. The Amli or Vilayati era still used by the mercantile and scribal classes and is counted from Bhādrapada *śudi* 12, *i.e.* the Suniā day. Similarly the *Sana* is also counted from the day of Suniā which is known as the Oriya new year day, from which the Aṅka or the regnal years of the Gajapati kings of the past used to be calculated. The *Sana* was continued to be used in all official and private records as well



as in the almanacs during the Mughal rule and also during the Marhatta occupation of Orissa (1751-1803). But with the introduction of the Christian era during the British regime (1803-1947), the *Sana* is found to be rarely used by the scribal or the mercantile communities in Orissa and its use in different records have been given up.

## NOTES

- <sup>1</sup>A. Cunningham, *Book of Indian Eras*, p. 1.
- <sup>2</sup>*Ibid.*, p. 1.
- <sup>3</sup>*Ibid.*, p. 1.
- <sup>4</sup>*Ibid.*, p. 2.
- <sup>5</sup>*Amarakosha (Kālavarga)*, V. 21.
- <sup>6</sup>D. C. Sircar, *Select Inscriptions*, Vol. I, p. 47, text line 15.
- <sup>7</sup>*Ibid.*, pp. 62-3ff.
- <sup>8</sup>*Ibid.*, p. 207.
- <sup>9</sup>*EI*, Vol. XXIX, pp. 169ff.
- <sup>10</sup>*EI*, Vol. XXI, pp. 2ff.
- <sup>11</sup>*EI*, Vol. XXVII, pp. 33-36.
- <sup>12</sup>*OHRJ*, Vol. VI, No. 2, p. 163.
- <sup>13</sup>*EI*, Vol. XXVIII, pp. 332ff.
- <sup>14</sup>D. C. Sircar, *Select Inscriptions*, Vol. I, pp. 192, 195, 229, 230 etc.
- <sup>15</sup>*IA*, Vol. XVIII, p. 143ff. For the early Eastern Ganga records, see S. N. Rajaguru, *Inscriptions of Orissa*, Vol. II.
- <sup>16</sup>*EI*, Vol. XXVIII, pp. 79ff, pp. 330ff.
- <sup>17</sup>B. Misra, *Orissa Under the Bhauma kings*; *EI*, Vol. XXVIII, pp. 211ff; Vol. XXIX, pp. 79ff. 220ff. etc.
- <sup>18</sup>S. N. Rajaguru, *Inscriptions of Orissa*, Vol. II.
- <sup>19</sup>S. Tripathy, *Inscriptions of Orissa*, Vol. VI.
- <sup>20</sup>S. N. Rajaguru, *Inscriptions of Orissa*, Vol. IV.
- <sup>21</sup>*EI*, Vol. XXVIII, pp. 79 ff; also see the Māṭhara grant, *EI*, Vol. XXIII, pp. 56-61ff.
- <sup>22</sup>*EI*, Vol. XXX, pp. 37-42 ff.
- <sup>23</sup>A. B. Mohanti (ed.), *Mahābhārata* by Sarala Dasa, this has been assigned to the period of Kapilendradeva of the Sūryavarmanī-Gajapati dynasty.
- <sup>24</sup>*SI*, Vol. V, No. 1126, No. 1024, No. 1093, No. 1345. No. 1027 etc.
- <sup>25</sup>*SI*, Vol. V, No. 1038.
- <sup>26</sup>*JAHS*, Vol. VIII, pp. 163ff.
- <sup>27</sup>*OHRJ*, Vol. I, pp. 208ff; see also another copper plate grant of the same king in *OHRJ*, Vol. IV, p. 67ff.
- <sup>28</sup>*Cf.* Dharmalingesvara plates of Anantavarman, year 204 (*EI*, Vol. XXVI, p. 65 ff. The Bhañjas of Khiching also adopted decimal system in some of their copper plate grants *IHQ*, Vol. XIII, pp. 427ff; *EI*, Vol. XXIII, pp. 73ff.
- <sup>29</sup>*Cf.* the Badakhemidi plates of Jayavarmadeva dated in *Samvat* 100 written decimal figures *EI* Vol. XXIII, pp. 267ff.
- <sup>30</sup>D. C. Sircar, *Indian Epigraphy*, p. 226.
- <sup>31</sup>For words to express particular number, see, G. H. Ojha, *Bhāratiya Prācīn Lipimālā* (Hindi), pp. 120 ff; D. C. Sircar, *Ibid*, p. 230 ff.
- <sup>32</sup>*JAHS*, Vol. VIII, p. 163.
- <sup>33</sup>*SI*, Vol. V, No. 1038.
- <sup>34</sup>S. N. Rajaguru, *Inscriptions of Orissa*, Vol. III, part i, p. 5; for the inscriptions of Choḍagaṅga, referring to *Śrāhi* years see, *ibid*, pp. 27, 29, 31, 37, 46, 47 etc.
- <sup>35</sup>For the inscriptions of Choḍagaṅga, see S. N. Rajaguru, *Inscriptions of Orissa*, Vol. III, part i.
- <sup>36</sup>*EI*, Vol. XXVIII, pp. 79ff.
- <sup>37</sup>*EI*, Vol. XXVIII, pp. 331ff.
- <sup>38</sup>*EI*, Vol. VI, pp. 143ff.
- <sup>39</sup>For views on the initial year of the Gaṅga era, see, G. Ramdas (349-50 A.D.), *JBORS*, Vol. XVIII, p. 291; R. D. Banerji, (741 A.D.), *History of Orissa*, Vol. I, p. 239; B. C. Majumdar (772 A.D.), *JBORS*, Vol. II, pp. 361 ff; R. Sewell (877 A.D.), *Hist. Ins. S. Ind.*, p. 58; S. N. Rajaguru, (626-27 A.D.), *Inscriptions of Orissa*, Vol. II, pp. 373ff etc.
- <sup>40</sup>*JAHS*, Vol. V, pp. 272ff.
- <sup>41</sup>*EI*, Vol. XXVI, pp. 326ff; Vol. XXVII, p. 192; Vol. XXVIII, pp. 171ff.
- <sup>42</sup>*EI*, Vol. XXX, pp. 37-42.
- <sup>43</sup>*JAHS*, Vol. III, pp. 171ff.
- <sup>44</sup>*EI*, Vol. XXIV, pp. 47ff.
- <sup>45</sup>G. H. Ojha, *Bhāratiya Prācīn Lipimālā* (Hindi), p. 187.
- <sup>46</sup>*EI*, Vol. XXVIII, pp. 63ff.
- <sup>47</sup>*OHRJ*, Vol. V, nos. 3 & 4, pp. 188-89ff.
- <sup>48</sup>Ojha, *op. cit.*, pp. 161ff.
- <sup>49</sup>For the Bhauma-Kara inscriptions, see, B. Misra, *Orissa Under the Bhauma Kings*, *IHQ*, Vol. XXI, pp. 213ff; *EI*, Vol. XXVIII, p. 211; Vol. XXIX, p. 79, pp. 210ff; pp. 220ff. etc.
- <sup>50</sup>S. Tripathy, *Inscriptions of Orissa*, Vol. VI, p. 201.
- <sup>51</sup>D. C. Sircar, *Indian Epigraphy*, pp. 297ff.
- <sup>52</sup>S. Tripathy, *Inscriptions of Orissa*, Vol. VI, pp. 186-95ff.
- <sup>53</sup>K. C. Panigrahi, *Chronology of the Bhauma-Karas and the Somapāṇīs of Orissa*, pp. 2ff.
- <sup>54</sup>*EI*, Vol. IX, pp. 285 ff; also the copper coins of Sri-Nanda, *OHRJ*, Vol. V, nos. 3 & 4, pp. 157ff.
- <sup>55</sup>Ojha, *op. cit.*, pp. 188-89.
- <sup>56</sup>*OHRJ*, Vol. VII, no. 2, pp. 86-90ff.
- <sup>57</sup>The plates are unpublished and are now preserved in the Orissa State Museum, Bhubaneswar.
- <sup>58</sup>A palmleaf manuscript called *Palaga-pañjika*, a work by Dhañanjaya Āchārya of Śaka 1655 (1733 A.D.), now preserved in the Orissa State Museum, states *Kapilābda* and *Mukundābda* in terms of Kaliyuga and Śaka eras.



## A NOTE ON THE TUMAIN INSCRIPTION OF KUMĀRAGUPTA I, G.E. 116

RANABIR CHAKRAVARTI  
GOPAL CHANDRA SINHA

THE Tumain inscription of Kumāragupta I (414-454 A.D.), dated Gupta Era 116 (=436 A.D.) was discovered in 1919. It was edited and translated by M. B. Garde.<sup>1</sup> D. C. Sircar also took this record into consideration.<sup>2</sup> The Tumain inscription has been included in the revised edition of the *Corpus Inscriptionum Indicarum*, vol. III (*Inscriptions of the Early Gupta Kings*).<sup>3</sup> The inscription records construction of a Śiva temple at Tumbavana (modern Tumain, Guna district, Madhya Pradesh) during the reign of Kumāragupta I by five brothers.

Penetration of the Gupta power into Malwa which includes Tumbavana began with the reign of Samudragupta (335-75). Among the rulers of North India (*āryāvartarāja*), defeated by Samudragupta, was Rudradeva.<sup>4</sup> This king is identified with Rudrasena III the Śaka ruler of Western India (348-378 with a break in 352-363).<sup>5</sup> Another concrete proof of Samudragupta's success in Eastern Malwa is furnished by his inscription from Eran, Saugar district, M.P.<sup>6</sup> Airikina modern Eran) is described therein as a "town of his own district" (*svabhoganagararaiḥṇa pradeśe*). The reign of Chandragupta II (375-413), son and successor of Samudragupta, witnessed further expansion and consolidation of the Gupta power in Malwa, obviously at the cost of the Śaka rulers thereof. Inscriptions from Udayagiri (Bhilsa district, M.P.) and Sanchi bear clear testimony of Chandragupta II's control over this area.<sup>7</sup> In fact the conquest of Malwa proved vital for the ultimate victory of the Guptas over the Śakas of Western India during the reign of Chandragupta II. Chandragupta II's son and successor, Kumāragupta I (414-454) is known for consolidating and keeping intact the territorial limits of the empire which he inherited. The Tumain inscription (along with other data) points to his hold over Malwa. The present record has received attention of scholars mainly because it contains the name of a Gupta prince, Ghaṭotkachagupta.<sup>8</sup> He was probably ruling there as provincial governor under Kumaragupta I.

Some other interesting information may also be gleaned from this record. It refers to a place named Vaṭodaka, "a settlement of merchants" (*Vaṭodake sādujanādhivāse*). The term *sādu* means, among other things, a merchant (cf. *Sāhu/Sāhā*, a current title among traders in Bengal).<sup>9</sup> The next line enumerates five brothers, Śrideva, Harideva, Dhanyadeva, Bhadradeva and Saṅghadeva. Judging from the context, these brothers appear to have been residents of the mercantile centre of Vaṭodaka. Vaṭodaka is identified with Badoh in Bhilsa district, M.P. not far from Eran.<sup>10</sup> It may be logically presumed that these brothers were merchants by profession; otherwise the account of their association with a trade centre loses its relevance.

We therefore encounter here a family of merchants. More significant is the fact that names of all the five brothers end in Deva suffix. This suffix is mostly attached to Brāhmaṇas and occasionally to Kṣatriyas,



but not to Vaiśyas or Śūdras. The five merchant brothers thus appear to have been Brāhmaṇas by birth, but took to the occupation of traders.

Brāhmaṇas were however traditionally assigned functions of offering sacrifices (*yājana*), officiating at others' sacrifices (*yājana*), studying the Vedas (*adhyāyana*), teaching (*adhyāpana*), making gifts (*dāna*) and receiving gifts (*pratigraha*). Ancient Indian theoretical treatises invariably emphasize on the taboo on change of calling to which a particular caste was assigned. Some Brāhmaṇas did enjoy the position of the *purohita* in the royal court and they received considerable amount of gift in the form of cash, cattle wealth, landed property, slaves and servants. But a large number of Brahmanas must have been not so fortunate as to be closely attached to the royal court and to enjoy considerable material benefits. For the latter type of Brāhmaṇas avenues of livelihood, other than those prescribed in the law-books, had to be taken recourse to. The *Gautama Dharmasūtra* lays down that if a Brāhmaṇa could not maintain himself by his normal occupations, he should follow the profession of a Kṣatriya and even of a Vaiśya.<sup>11</sup> Baudhāyana more or less echoes the same argument.<sup>12</sup> Manu, Yājñavalkya, Viṣṇu and other later law-givers also relax the strict rule of occupations for different castes, including Brāhmaṇas, but only in the wake of a calamity or distress (*āpad*).<sup>13</sup> The logic of *āpaddharma* allows a Brāhmaṇa to take up trading (among several non-Brahmanical professions) but includes a long list of articles of commerce which the Brāhmaṇas were forbidden to trade even in distress.<sup>14</sup> Nārada also speaks of commercial vocations of Brāhmaṇas (*Sadā śrotriya-varyāni śulkaṇyāhuḥ prajānatā|grhopayogi yaceaiśām na tu vāñijya karmaṇi*).<sup>15</sup> The Dharmaśāstras thus give a tacit hint that the taboo on change of calling was not always insurmountable.

Actual incidents of such change of profession are known in the Gupta period. The Vakāṭakas, though Brāhmaṇa by birth became rulers of a fairly large territory in the Deccan. Similar change can also be seen in the Brāhmaṇa Kadamba family of Banavāsī. Mayūraśarman, the founder of the Kadamba dynasty, not only changed his Brahmanical profession to rulership, but also the suffix *śarman* (a Brāhmaṇa title) was subsequently replaced with *varman* (a non-Brāhmaṇa) title. In the reign of Kumāragupta I the Kalai-kuri Sultanpur C.P. of 120 G.E. (440 A.D.) refers to a number of *kuṭumbins* (agriculturists) in North Bengal. Among them were Maghśarma, Hariśarma, Guptaśarma and Suśarma.<sup>16</sup> These persons with *śarma* name-ending were definitely of Brāhmaṇa origin, but took to agriculture. The Mandasore inscription of the time of Kumāragupta I (436 A.D.) says that a Sun temple was built by members of a silk weaving guild.<sup>17</sup> They hailed from Lāṭa (Gujarat) and settled at Daśapura (modern Mandasore) where some members of the guild adopted different professions, e.g. archer, story-teller, exponent of religious problems, astrologer, warrior and ascetic. A guild is an association of persons following a common craft or trade, and such change of profession among the members of a guild is not favoured in the legal treatises. But here we find a clear case of both spatial and occupational mobility. Two merchants (*vaṇik*), Achalavarman and Bhṛkūṭiśirṇha figure in the Indore C.P. of Skandagupta (G.E. 146=466 A.D.).<sup>18</sup> These merchants are explicitly stated to have been Kṣatriyas.

The Tumain inscription therefore is not an isolated example or an exceptional case regarding deviations from prescribed functions of a particular caste. The theoretical taboos on change of occupation were perhaps not as powerful as they appear to have been in legal texts. The above data, which effectively demonstrate that caste-affiliations and occupations did not always correspond, do not suggest that such deviations from the norm were due to any pressure or calamity (*āpad*). Such information regarding change of profession therefore can be appreciated without always referring to the concept of *āpaddharma*. The theory of *āpaddharma* was probably formulated by law-givers to explain and justify occupational mobility under the pretext of an *āpad*.

Focussing our attention once again to the closing line of the Tumain inscription, one finds that these merchant brothers built a temple of Pinākin (Śiva) at Tumbavana. D. C. Sircar reads the passage: "[Kṛtā]layāstumbavane va[bhū]vuh".<sup>19</sup> The passage indicates that these Brāhmaṇa merchants shifted their



habitat from Vaṭodaka to Tumbavana. D. R. Bhandarkar however reads: “*K[ṣatr]ālayāst[ū]mbavane babhūvuh*”. According to him, they “became the abodes of Kṣatriya valour in Tumbavana”.<sup>20</sup> He further explains that “Śrīdeva and his brothers embraces Kṣatra profession in Tumbavana”.<sup>21</sup> If Bhandarkar’s reading is accepted, the passage indicates that the Brāhmaṇa merchant brothers performed politico-administrative functions in Tumbavana. So one notices another change in their profession: first Brāhmaṇas to traders and then traders to local administrators. This was coupled with spatial mobility: from Vaṭodaka to Tumbavana.

The toponym Tumbavana sounds like a forest region. The Gupta and post-Gupta periods are well known for creation of settlements in forest regions. Such settlements were often created by bringing Brāhmaṇas and/or establishing temples/other religious establishments in a hitherto uncultivated or uninhabitable area (like a forest or a barren tract).<sup>22</sup> This process undoubtedly helped expansion of agriculture. It is therefore hardly surprising that a Brāhmaṇa family, which came to prominence and became influential through their trading gains, was allowed to settle in a forest tract of Malwa and empowered with some administrative rights.<sup>23</sup>

The Tumain inscription has so far been utilized for understanding the political history of the Gupta period. The above discussion may show that it gives us valuable clues regarding social condition in general and social mobility among the Brāhmaṇas in particular during the Gupta period.

#### NOTES

<sup>1</sup> *Indian Antiquary*, XLIX, pp. 114-15; *Epigraphia Indica* (EI), XXVI, pp. 115ff.

<sup>2</sup> D. C. Sircar, *Select Inscriptions bearing on Indian History and Civilization* (SI), vol. I, (Calcutta, 1965) pp. 297-99.

<sup>3</sup> *Corpus Inscriptionum Indicarum*, vol. III (New Delhi, 1981), revised by D. R. Bhandarkar and others, pp. 276 ff (CII).

<sup>4</sup> CII, p. 213, l. 21.

<sup>5</sup> SI, p. 265, f.n. 2.

<sup>6</sup> CII, pp. 220-24.

<sup>7</sup> CII, pp. 242-44, 247-52, 255-57.

<sup>8</sup> CII, p. 278, l. 3. This Ghaṭotkachagupta is identified with the homonymous person whose seal was found from Vaiśālī. CII, pp. 294-96.

<sup>9</sup> Monier Williams, *Sanskrit-English Dictionary*, p. 1201; D. C. Sircar, *Indian Epigraphical Glossary* (Delhi, 1966), p. 284.

<sup>10</sup> SI, p. 298, f.n. 8.

<sup>11</sup> P. V. Kane, *History of the Dharmaśāstras*, vol. II, pt. 1 (Poona, 1974), p. 118 (HD).

<sup>12</sup> HD, p. 119.

<sup>13</sup> HD, pp. 119-20.

<sup>14</sup> HD, pp. 126-30.

<sup>15</sup> Attention to this passage is drawn by D. C. Sircar, *Problems of Early Indian Social History* (Calcutta, 1983), p. 45, f.n. 6.

<sup>16</sup> SI, p. 353, ll. 6-7.

<sup>17</sup> CII, pp. 322-32, verses 16-19. It is significant that some weavers became astrologer and exponent of religious problems. These functions are usually ascribed to a Brāhmaṇa. Does it suggest in this case an upward mobility for those particular weavers?

<sup>18</sup> CII, pp. 308-312.

<sup>19</sup> SI, p. 299.

<sup>20</sup> CII, p. 279.

<sup>21</sup> *Ibid.*, f. n. 4.

<sup>22</sup> Several such instances are seen in Bengal during the Gupta and post-Gupta times. Land grants of the Gupta times in Bengal are mostly sale-cum-gift deeds. The land transacted was mostly uncultivated fallow tracts (*apradāprahata khilakṣetra*). Such lands were to be developed at the initiative of the donee whose religious performances would be sustained by the income from such developed plots. During the post-Gupta phase Sāmanta Lokanātha (664 A.D.) created a settlement of Brāhmaṇas in a dense forest in modern Sylhet (EI, XV, pp. 301-15). Sāmanta Maruṇḍanātha (8th century A.D.) established in Sylhet a temple of Anantanārāyaṇa in a marshy forest area (*jalālavibhūkhāṇḍe*). See D. C. Sircar, *Epigraphic Discoveries in East Pakistan* (Calcutta, 1973). Such grants of land in the long run improved the economic condition through expansion of agriculture. See Ranabir Chakravarti, “Creation of Settlements in Early Medieval Bengal : Three Case Studies” (forthcoming).

<sup>23</sup> An interesting parallel may be cited here on the basis of the Dudhpani inscription of 8th century (EI, II, pp. 343-47). It says that three merchant brothers Udayamāna, Śrīdhautamāna and Ajitamāna came to Tāmralipta from Ayodhyā and amassed great fortune. On their way back home they halted at a village, Bhramaraśālmali (near modern Hazaribagh). The king of that region, Ādisiṃha came to this area on a hunting expedition. The king demanded *avalagana*/*avalagaka*, literally meaning supply or present. The eldest of the merchant brothers paid the requisite amount. They became favourites of the king, and subsequently were entrusted with administrative responsibilities over Bhramaraśālmali and two other contiguous arcas. This is an instance of traders transforming into petty rulers.



# ANTHROPOLOGY IN THE MUSEUMS OF INDIA DURING THE BRITISH PERIOD

SABITA RANJAN SARKAR

## INTRODUCTION

**A**FTER the battle of Palasy (1757) the East India Company gradually began to consolidate its position in Indian political field. When the British rule was firmly established in India, efforts were made to introduce English education in this country. European system of education found its firm foothold first in Bengal towards the close of the 18th century. This province was, therefore, selected by the European scholars and administrators as a centre for carrying out study on India's rich cultural heritage and natural wealth. Opportunity of making this study was made available in 1784 when Sir William Jones (a Puisne Judge of the Calcutta High Court) founded the Asiatic Society of Bengal in Calcutta. The museum movement in India was started with the inception of this Society.

## Beginning of Anthropological Collection

In explaining the objective of the society Sir William Jones in his inaugural speech made it clear that the society was meant for carrying on consorted and systematic study of history, art, culture and natural history of the Orient. He also laid stress on ethnographical study in his address with a view to know and understand the Indian culture in its true perspective. Accordingly, when the Society had started functioning, the scholars attached with it, began anthropological field investigation on different aspects of Indian cultural life. Simultaneously they also started collecting the traditional cultural artefacts in course of making such investigations. Thus the collection of ethnographical specimens was started for the first time in India with the beginning of anthropological study under the initiative of this learned Society. Specimens of other branches of knowledge under study such as art, archaeology, geology, zoology, botany etc., were also being simultaneously accumulated. With the accumulation of a large number of specimens within a short span of time, the Society felt the need for a building of its own. When the new building was ready, the ethnographical specimens of the Society together with the other categories of collection were shifted there in 1808.

## Anthropological Collection in the Oldest Museum

Initially the Society had no idea of establishing a museum. The propriety of its establishment in the Society's building had been informally suggested by H. William, Honorary Secretary of the Society in 1796. But Dr. Nathaniel Wallich, a Danish Botanist actually gave an active impetus to this proposal through a letter dated February 2, 1814 to the Council of the Society offering his service as Honorary Curator. He also promised to donate duplicate specimens from his personal collection for the proposed museum. The Society accepted the proposal and for consolidating the collection made an appeal to the public soliciting contribution of all articles that might be useful to illustrate oriental manners and history, or to elucidate



the peculiarities of Art or Nature in the East. The anthropological specimens of definite nature like the figures of Hindu deities, instruments of war peculiar to the East, instruments of music, vessels used in religious ceremonies, implements of native art and manufacture etc., were made specific in the appeal. The first museum of the country under the name 'Oriental Museum of the Asiatic Society' with Dr. Wallich as Superintendent was founded in the premises of the Society in 1814. Initially this museum had two sections—Archaeology-Ethnology and Geology-Zoology. The Librarian of the Society was in charge of the Archaeology-Ethnology Section.

Paucity of fund and staff stood on the way of maintaining properly the museum specimens on display and the reserve collection right from the very beginning. Ultimately the Society had no other alternative but to make repeated appeal to the East India Company, the then ruler of the country for financial assistance to overcome these shortcomings. The Company responded favourably. The Society was then in a position to appoint paid Curators from 1839 onward out of fund granted by the Court of Directors of the East India Company. The Curators took up different curatorial jobs for the development of the museum. Dr. R. L. Mitra prepared a catalogue of anthropological, archaeological and industrial botanical specimens in 1849 in order to assess the museum collection. The work revealed that a large number of anthropological specimens collected before 1814 were very badly damaged due to faulty storage in dark, damp and dirty rooms. Some of the earlier collections which were still in existence, had lost value as they were either not properly labelled or had since lost their labels. In this stage the display was also not in scientific order. There was no clear cut distinction in arranging the ethnological and the archaeological specimens which were on display in the single gallery. The collection of both the subjects were exhibited in the same gallery overlapping each other.

### Formation of Indian Museum

In the meantime the collection of the museum began to grow so rapidly within a few decades that the Society had to think in terms of forming an Imperial Museum in Calcutta. At the request of the Society, the Government of India constituted the Board of Trustees for the proposed museum in 1865. Subsequently in 1866 the Indian Museum Act was passed. According to the agreement reached between the Society and the Government, the Society made over its entire collection to the Board of Trustees in the same year and Dr. John Anderson was appointed as the first Curator of this Imperial Institution. The Oriental Museum of the Asiatic Society then reached at a stage when it ceased to be the property of the Asiatic Society of Bengal and was transformed into an Imperial Institution assuming the new name—"Indian Museum". But it was not until 1875 that the building for this museum was ready for occupation.

### Anthropological Collection in the Indian Museum

Dr. Anderson showed interest in the anthropological collection handed over by the Asiatic Society to this new museum. He wrote in the first Annual Report of the Indian Museum (January, 1867) which reads:

"If the ethnology of India is to be illustrated in the galleries of the new building, each leading tribe should have its physical features portrayed by male and female crania and pelvis and by coloured casts taken from life and its civilization delineated by the clothing of the tribe and by its manufactures whether for household purposes, agriculture, chase, defence, ornaments, amusement or religious worship."

It is evident from the Annual Report of the subsequent years that under the able guidance of Dr. Anderson, ethnographical specimens worth mentioning were being added to the collection from



different parts of the country and abroad from 1866 onwards. The conspicuous acquisition was a set of magnificent collection of the musical instruments received as gift from Raja Jatindra Mohan Tagore, Babu Sourindra Mohan Tagore and Rani Swarnamoyee in 1875. The ethnographical specimens in this new museum could not be arranged in the gallery for want of space and fund. They were simply stored in the reserve.

After the great Calcutta Exhibition was over, the Government of Bengal set up the Bengal Economic Museum with the help of exhibits exhibited in the exhibition. The new museum was accommodated in the temporary sheds close to the Indian Museum for amalgamation with this Imperial Institution at the opportune moment. The anthropological specimens of the Indian Museum which could not be displayed for want of space in the gallery, was made over to the Bengal Economic Museum in 1885 for better upkeep. However, this new museum was soon closed. The entire collection of the Bengal Economic Museum was handed over to the Trustees of the Indian Museum on 1st April, 1887. With the addition of 2,817 ethnographical specimens of the Bengal Economic Museum to the 3,700 specimens of the Indian Museum, the total ethnographical collections of the Indian Museum reached to 6,517 in all.

In the meantime an extension of the Indian Museum building was completed at the Sudder Street side. A separate anthropology gallery (with an area of 7,304 sq. ft.) was set up in the Indian Museum for the first time in this available space. It was thrown open to the public on 1st January, 1893. Objects of different categories of material culture were put on display in the wall-cases of this gallery, whereas the ethnology of Andaman, Nicobar, Burma, Lower Bengal, Chittagong region were displayed with life size models in the central cases. But the display was somewhat crowded due to lack of adequate space. Though the space for the anthropology gallery was made available but the problem of storage space for the sectional reserve collection remained same as it was before. However, the anthropological collections till then was associated with the Industrial Section. With no scope of study and research, the anthropological collections were counted merely as curious objects, when they were under the Archaeology and Industrial Sections. Sir Herbert Risley, an eminent ethnologist and efficient administrator came forward to salvage the anthropological collection from such petiable condition.

Sir Risley, the then Chairman of the Board of Trustees of the Indian Museum proposed in 1904 to transfer the anthropological collections from the Industrial Section to the Zoology Section. His proposal received the sanction of legislation in 1910, and the transfer was executed in 1911. While under the Zoology Section fresh attempts were made for the development of ethnographical collection as well as the gallery. S. W. Camp, a staff member of the Zoology Section of the Indian Museum, as naturalist participated in the military expedition in North-Eastern Frontier Region in 1911-12. He collected valuable specimens from the Abor, a dominant and colourful tribe of the region for enhancing the scientific value of the ethnographical collections, of this museum. Raja Sourindra Mohan Tagore also presented a magnificent series of Japanese and Bengali musical instruments in 1914 in commemoration of the centenary of the Museum.

In the meantime the Government of India, Department of Education created the Zoological Survey of India in 1916 out of the Zoological and Anthropological Section of the Indian Museum. Dr. N. Annandale was placed in charge of the zoological and anthropological collections. It paved the way for carrying out anthropological research in the Indian Museum. Till then there was no anthropologist among the staff of the Zoological Survey. But fortunately Dr. Annandale was himself keenly interested in the subject and had had some anthropological experience both in the Faroe Islands and the Malay Peninsula. During the years 1916-19 Dr. Annandale took a number of measurements and observations on the Anglo-Indians of Calcutta and the results were entrusted to Prof. P. C. Mahalanobis for statistical examination. As at that time there was but little likelihood of any great increase in the anthropo-



logical activities of the Zoological Survey, this report was incorporated in the *Records of the Indian Museum*, a special volume (No. XXIII) being devoted to it.

More concrete step was taken when Dr. R. B. Seymour Sewell assumed the charge of the Zoological Survey of India in 1926. He felt the urgent necessity of a wholtime officer for taking proper care of the anthropological collections. Strongly supported by the Trustees of the Indian Museum, Sewell made an appeal to the Government of India to appoint an anthropologist. Dr. B. S. Guha was appointed as an anthropologist in the Zoological Survey of India in 1927 and was confirmed in 1929. This was for the first time that the anthropological collections of the Indian Museum came directly under the care and supervision of an anthropologist.

Dr. Guha was the product of Harvard University. He had his training in primitive arts and industries with Professor R. B. Dixon. Guha also served as Graduate Assistant at Harvard University in Peabody Museum. So he had some inclination towards the museum activities. At the sametime he had special interest for field work. As was trained in Harvard University, he tried to maintain the American tradition in anthropological work. He made extensive field work in NEFA, Nagaland, Andaman Islands and many other inaccessible parts of the country. Title of the first field report of Dr. Guha brought out in the *Anthropological Bulletin* from the Zoological Survey of India (No. 1) was "A report on the human relics recovered by the Naga Hills (Burma) expedition for the abolition of Human sacrifice during 1926-27".

Dr. Guha fresh from America started research work dealing with the anthropological collection of the Indian Museum and also with the Indian population both past and present. He initiated the study of the skulls comprised with most of the prehistoric crania excavated from several places in India such as Mohenjodaro, Harappa, Taxilla and from various megalithic sites. These skulls were under his charge in the anthropological section of the Zoological Survey. For the publication of the result of the anthropological research Dr. Sewell introduced a new bulletin under the title *Anthropological Bulletin* from the Zoological Survey of India. Not only in research, all round development took place in the anthropological division of the Zoological Survey under the leadership of Dr. Guha. In this connection Markham and Hargreaves in their publication *The Museums of India* (p. 130, 1936) reported:

"Improvement in the activities relating to the ethnographical collection was witnessed in the display and arrangement of exhibits in the Gallery. Publications on the exhibits and the illustrated guidebooks were available for sale in the museum. For the first time in the ethnographic gallery, particular aspects of Indian life and culture were introduced."

The anthropological collections of the Indian Museum were under the Zoological Section from 1911 to 1945. This collection of the Indian Museum got itself dissociated from the Zoological Section in November, 1945 when the Government of India formed the Department of Anthropology (now known as Anthropological Survey of India) with Dr. B. S. Guha as its first Director. Dr. Guha took away all the anthropological specimens from the Zoological Survey and included them in the newly formed department. Thus with the formation of this department, the entire anthropological collection as well as the gallery came under a separate section in the Indian Museum under the control of the Department of Anthropology, a Central Government Organization. Thus it is aparent that the Anthropology Section under the Zoological Survey of India corelated with the able guidance of Dr. B. S. Guha played a significant role and acted as a nucleus in developing the Anthropological Survey of India, the largest organization in carrying out anthropological research in this country.

### **Museum Movement and Anthropology in different Museums of India**

With the establishment of the museum in Calcutta under the initiative of the Asiatic Society of Bengal, the museum movement in India which had started in 1814 took a definite shape. This



movement soon spread to the major cities of Southern and Western India like Madras, Trivandrum, Bombay, Baroda and others. Madras Literary Society, an auxiliary of the Asiatic Society of London, gave a spur to this movement in Madras. Under the initiative of the Society and with the active assistance from the Court of Directors of the East India Company, Madras Central Museum was opened at the College of Fort St. George in 1851 with Surgeon E. G. Belfour as its head. Ethnology, however, was given a place for the first time in this museum in 1878 with the acquisition of Breeck's collection when Dr. Bidie was the head of this museum. But the significant development of the ethnology section took place during 1885 to 1910 when Edgar Thurston was the Superintendent of the museum. He also acted as the Superintendent of Ethnography of Madras Presidency. It offered him adequate opportunity to give due attention for developing the anthropological collections of the museum. As the Superintendent of Ethnography he carried out the survey on the castes and tribes of Madras Presidency for eight long years. Along with the survey he simultaneously carried out the collection of ethnographical materials for the museum. Not only the specimens, he also collected the photographs of the native types, prepared lantern slides depicting the tribal life style, made phonographic records of tribal songs and music and also brought out bulletin for publication of the result of his ethnographic survey. The product of his survey—*The castes and tribes of South India* in seven volumes were published in 1909. Apart from ethnography, the prehistoric collections of the museum was enriched by the gifted specimens of Brucefoot who also prepared the catalogue of his collection for the museum. Rea's collection of Adichannallur skulls and other skeletal fragments found from the South Indian megalithic burials offered ample scope for developing the physical anthropological collections in this museum.

Ethnographic research in this museum rose to a great height during the tenure of Thurston. After his retirement, this museum had no anthropologist and when Baron von Eickstedt, the well-known German anthropologist visited Madras, he was successful in persuading Dr. F. H. Gravely, a naturalist, then head of the museum to revive anthropological research so well started by Thurston at the Madras Museum. Diwan Bahadur K. Rangachari who had worked under Thurston, was appointed part-time ethnologist in 1927. Due to his old age Mr. Rangachari could not make much progress. But he was a good field anthropologist in the old style. To help him in this sphere Mr. Aiyappan was appointed as anthropological assistant (post later renamed Curator) in the Madras Government Museum in 1929. Rangachari initiated Aiyappan into the intricacies of field work. But the idea of the museum authorities then was to train up a biology graduate in anthropology. Aiyappan who had Master Degree in Biology from Madras University was sent to the Madras Medical College to undergo a full one-year course in human anatomy and in 1930 to the Indian Museum for training under Dr. B. S. Guha in Physical Anthropology. During the period 1934-37 Aiyappan worked in London University for his Ph.D. in Social Anthropology and also for his Diploma of the London Museums Association. While in abroad Aiyappan visited all the leading museums of U.K., France and Germany and learnt how to organise anthropological collections and make them educationally useful even to children. Aiyappan was the Curator of Anthropology of Madras Museum from 1929 to 1940 and became its Director in 1941 and continued up to 1958 in this capacity. For giving due attention to all the leading branches of anthropology, he divided his attention and research time among prehistoric archaeology, physical anthropology and social anthropology. As anthropologists were then very few in India and the vast field was almost virgin, it was natural that those few Indian anthropologists had to be generalised and not specialists. Thus before the introduction of anthropology as academic discipline in the Universities of South India, Madras Museum was the centre of anthropological study and research in the south under the able guidance of Thurston and Aiyappan.

The example set up by the two Societies in Madras and Calcutta, proved to be a great incentive and many more new museums were thrown open in different parts of the country. The Victoria and Albert Museum in the west and Trivandrum Museum in the south established in 1851 and 1857 respectively were conspicuous among them. Both the museums possessed ethnographical collections from the very



beginning. Ethnographical collections of Victoria and Albert Museum initially consisted of the death masks of Trans-Himalayan tribes. This collection was made for the museum under the initiative of Dr. Buist, a connoisseur of antiquities who was its first Honorary Curator and Secretary. The idea of setting up of this museum was given a definite shape in 1851 in connection with the great exhibition held in London with a view to illustrate the raw products of Western India. Though initially administered by a committee with the financial assistance from the Government and the Native states, this museum was transferred to the Bombay Municipality from October 1855. The ethnographical collections of the Trivandrum Museum was developed with the financial assistance from the Travancore State.

The progress of the museum movement was retarded for the time being due to the Sepoy Mutiny in 1857. Immediately after the crushing of the mutiny the museum movement was started again in 1863, when two museums were opened at Lucknow and Nagpur respectively. Lahore Museum (now in Pakistan) was established in 1864. Six more museums *viz.* Mysore Government Museum at Bangalore (1865), Fyzabad Museum (1867), Delhi Municipal Museum (1868), Calcutta Economic Museum (1870), Mathura Museum (1874) and Raipur Museum (1875) were set up in the next decade. Four museums among them like Lucknow Museum, Lahore Museum, Nagpur Museum and Mysore Government Museum had ethnographical collections in their possession. It is true that the ethnographical specimens in the form of tribal weapons were under the early collection of the Nagpur Museum when it was first established in 1863 under the initiative of Sir R. Temple. But its anthropological section was formed in 1914 out of a portion of collection which was made for the British Museum from the tribal areas of the then Central Province and Berar. Established in 1863 and originally known as Provincial Museum, the State Museum of Lucknow assumed its present name when its management and control was taken over by the Provincial Government in 1883. Fullfledged anthropology section of this museum was formed in 1911 when its collection was divided for reorganisation into four major sections *viz.* Archaeology, Natural History, Paintings and Ethnography. The entire collection of the Bengal Economic Museum which was built up in Calcutta in 1884 after the great Calcutta exhibition of 1883 was over, was amalgamated with the Indian Museum in 1887.

The museum movement in India failed to make headway for a decade or so till 1887 when the Jubilee of Queen Victoria was celebrated all over the British empire. The Jubilee celebration of the British Queen ushered in a new era in museum movement with the foundation of several museums not only in India, but also in other parts of the British empire. Several museums worth mentioning which were established in different parts of this country in this connection were Victoria Institute (Madras, 1890), Museums at Jaipur, Udaipur, Bhopal and Trichur (1887), Rajkot Museum (1888), Baroda and Bezawada Museums (1896), Victoria Memorial Hall (Calcutta, 1906) and so on. The number of museums in India went up to 26 by the addition of these Jubilee museums. Only the Baroda Museum had ethnographical collection among these Jubilee museums. The second phase of museum movement in India during the British period came to an end by 1900.

The third phase of museum movement in India was initiated by the British Civil Servants, especially from the time of Lord Curzon. The Indian Treasure Trove Act was passed in 1878 during the Vice-royalty of Lord Lytton. Lytton also recommended the appointment of a curator for the ancient monuments and this recommendation was implemented in 1888. But the most significant steps were taken in this regard when Lord Curzon was the Governor-General of India. Ancient Monuments Preservation Act was passed in 1904 by his initiative. It was Lord Curzon who reviewed the Archaeological Survey of India with a view to surveying and exploring the relics of ancient Indian culture. At the suggestion of Sir John Marshall, the then Director-General of the Archaeological Survey of India, a large number of site museums under the direct control of the Survey were set up in important archaeological sites between 1907 and 1913.

The first 'Directory of Museums' in India was compiled by Dr. J. Ph. Vogel in 1911 at the initiative



of the British Civil Servants. It contained information of each one of the then existing 30 museums of the country. During this period, the Indian Museum movement was occasionally accelerated to an appreciable extent by the visits of the members of the British Royal Family. At the time of the visit of the Prince of Wales in the first quarter of the 20th century, the Prince of Wales Museum was opened to commemorate this occasion. This Museum had an embryonic Anthropology Section. It was started with the specimens received from the Anthropological Society of Bombay and the Bombay Branch of the Royal Asiatic Society in 1920. The Ethnographical Section of the Indian Museum was also benefited indirectly by such visits. Raja Sourindra Mohan Tagore, an elite and a great connoisseur of music collected a complete set of musical instruments in 1875 for the band party from Bengal that played before the King Edward VII in Delhi Darbar. He handed over the same to the Indian Museum (Calcutta) in 1914 in commemoration of the centenary of the museum.

Out of a grant from the Carnegie Corporation of New York, Markham and Hargreaves made a survey in early thirties on the condition of the then existing museums of India. In 1936 they brought out a publication entitled *Report on the Museums of India* which included 105 museums.

The development of museums was given top priority in Wheller's reorganisation scheme formulated in early forties. Under this scheme a Museum Branch was created in 1945 to look after the museums under the Archaeological Survey of India. The Antiquities (Export Control) Act was passed in 1947. The museum movement in British India which had started in 1784 came to an end when the chapter of British rule in this country was closed on the 15th August 1947. During the third phase of the museum movement, nothing was done for the ethnographical collections in the museums of India. All the enactments concerning museums were passed for safeguarding the art and archaeological specimens. Most of the museums which were developed during this period, except the museums of the teaching institutions, were concerned with art and archaeology only.

#### OBSERVATION

##### 1. Starting point of ethnographical collection in India

The collection of ethnographical specimens in India had been initiated even before the museum movement was started. Initially the collection was made by the learned Societies like the Asiatic Society of Bengal (1784), Madras Literary Society (1828) and others in connection with making the study of art, history, culture and nature of the orient in the systematic order.

##### 2. Reason behind the collection of ethnographical specimens

Initially the collection was made with no definite end in view. Specimens were just collected in course of making scientific field investigation, probably to serve as documentary evidence for ethnographical studies.

##### 3. Purpose of setting up of museum with ethnographical specimens

It was for the upkeep of these valuable collections, the idea of setting up of museum with ethnographical section was first cropped up. The Oriental Museum of the Asiatic Society of Bengal which later on assumed the name 'Indian Museum' was built up by the Society mainly to preserve their valuable collection made in course of field investigation by scholars associated with it. Similarly with this view in mind, the Madras Literary Society urged the Government to set up a museum in Madras. The Anthropological Society of Bombay and the Bombay branch of the Royal Asiatic Society handed over all their ethnographical collections to the Prince of Wales Museum in 1920 when it was first set up in Bombay.



#### 4. Persons responsible for building up ethnographical collection in the initial phase

Apart from the scholars attached with the learned Societies like Asiatic Society of Bengal, Madras Literary Society, Bombay branch of the Royal Asiatic Society and Anthropological Society of Bombay, the British Civil Servants and the Military personnel in India were also responsible for building up of the ethnographical collections during the first phase of museum movement in India. Dr. E. G. Balfour was responsible for making collection of the ethnographical specimens in Madras Museum right from 1851. A separate ethnographical section of this museum was set up under the initiative of Dr. Bidie in 1878. Trivandrum Museum (1857) had its ethnographical section due to sincere efforts made by General Collins. It was for the initiative taken by Sir Richard Temple, the then Commissioner of Central Province, the ethnographical collection of the Central Museum, Nagpur (1863) was built up from the very inception of the museum. Dr. Anderson, Dr. Adcock, Mr. Kemp—all staff of the Indian Museum accompanied military expeditions in tribal concentrated frontier regions and collected ethnographical specimens for the museum making the collection best of its kind in the country. Commenting on the European staff of the Indian museums, Markham and Hargreaves in their report (1936) mentioned that “up to 1887, when the Victoria Museum in Udaipur was started, every museum in India owed its origin to the presence of the British and up to this date all the Curators and Principal members of the staff were Europeans trained in European technique. The first of a long line was Dr. Nathaniel Wallich, the Danish botanist, who became Curator of the Asiatic Society Museum in 1814, but from that date until 1887 almost without exception, all the principal officers of museums were British.”

Following the examples of the European Civil Servants, the rulers of the Native States contributed much towards the development of ethnographical collections during the second phase of museum movement in India. Ethnographical collections of the Baroda Museum (1895) and Lady Wilson Museum (Dharampur, 1910), were built up by the gifts made by the then native rulers of the respective states. They generally used to collect specimens in course of making expedition or excursion in the tribal areas of their states. They also occasionally purchased interesting specimens with the intention of donating them subsequently to the museums. They usually developed the collection of tribal specimens in the museum with a view to show the diversity of cultural elements among the population of the states. Among eighteen museums which had ethnographical collections (according to the list prepared by Markham and Hargreaves in 1936), seven museums were developed under the financial and administrative control of the Native States.

Social elites and enlightened landlords also contributed much towards the building up of ethnographical collections in the museums. The nucleus of the collection of musical instruments which is now considered to be the valuable collection of the Anthropological Section of the Indian Museum was built up out of the gift made by Raja Sourindra Mohan Tagore, Raja Jotindra Mohan Tagore and Maharani Swarnamoyee in 1875 and again in 1914 by Raja Sourindra Mohan Tagore. Main objective of such gift on the part of the landlords was to enhance their reputation as the connoisseur of art among the European scholars and as elites to evince their consciousness on the traditional culture of the country. Donation of significant cultural artefacts on their part to the museums on the occasion of the royal visit to this country, served as a proof of their loyalty to the crown.

The teaching institutions and the learned Societies initiated the move to collect the ethnographical specimens for their museums to suit their purpose in the third phase of the museum movement in India. The Assam Research Society and the Andhra Historical Research Society started their museums in 1912 and 1928 respectively. Ethnographical specimens for these museums were collected to carry on ethnographical study in the societies. Rai Bahadur Sarat Chandra Roy, the famous ethnographer of his time, built a small museum in his house at Ranchi in 1918 consisting of ethnographical specimens of the aboriginal tribes of Chhotanagpur and archaeological finds which he excavated from various Asura sites of



Central India. This was almost exclusively an ethnological museum meant for the study and research on the Chhotanagpur tribes.

### Museums with ethnographical collection

(a) *Number* : The authentic information on the museums of India during the British period is traced from the book *The Museums of India* by Markham and Hargreaves (1936). The analysis of the information contained in the books reveals that out of 105 museums dealt with, only eighteen had ethnographical collection. In dealing with the nature and scope of the ethnographical collection, reference of only four museums was there. They were Indian Museum, Baroda Museum, Madras Museum and Gauhati Museum. It was specifically mentioned that "there are in the whole of India only two or three museums having an adequate section dealing with ethnology".

(b) *Financial assistance* : Out of eighteen museums with ethnographical collection, only one (Indian Museum) was developed with direct financial assistance from the Government of India. Ethnographical collections among the remaining seventeen museums were developed mainly with the financial assistance from the State Government (six museums), Native States (seven museums) Municipalities (three museums) and Research Society (one museum).

(c) *Nature* : Collection of ethnographical specimens was started from the very beginning of the museum movement in India. But they were never developed independently to give rise to exclusively ethnographical museums. They were associated with composite museums having specimens of other branches of knowledge such as art, archaeology, geology, zoology and botany. The museums with ethnographical collection worth mentioning were Indian Museum, Madras Museum, Baroda Museum, Lady Wilson Museum, Lucknow State Museum, Central Museum (Nagpur) etc., and they were all composite in nature. All these museums had no separate ethnographical section at the initial stage to look after their respective ethnographical collection. These collections were under the supervision of the officers of other sections. For example, the ethnographical collections of the Indian Museum in the initial phase were under the Archaeological Section (1866-1884). Next they were transferred to the Industrial Botany Section where they were from 1885 to 1910. Then they were included in the Zoology Section and were there from 1911 to 1944. For the first time the ethnographical collection of the Indian Museum became associated with the Anthropology Section in 1945 when they were transferred to the Department of Anthropology which was newly created by the Government of India to carry on anthropological study and research in this country. In case of other museums like Madras Museum, Lucknow State Museum and Nagpur Central Museum which were established in 1850, 1863 and 1864 respectively and had ethnographical collection from their very inception, had set up their respective anthropological section only in 1896, 1911 and 1914 for paying due attention to their ethnographical collection.

### Method of collection and its consequence

In the earliest phase when the nucleus of the ethnographical collection was being developed under the patronage of the learned Societies, collection was made through extensive field work by the competent scholars in systematic order. As soon as the Society museums came out of the fold of the Societies, the scope of collection through field work almost ceased. These museums had no separate ethnographical section. There was also no special officer with adequate knowledge on the subject to deal with them. Therefore the ethnographical collections in different museums of India in the initial phase began to grow in number mainly through gifts from military personnel, native rulers, enlightened landlords and scholars of other branches of knowledge. As a result the bulk of the ethnographical collections were being gradually increased in number unsystematically. There were undoubtedly huge and rich collections in many museums. But the information essentially required for carrying out proper anthropological study with them was almost



absent. At the same time scientific method was not followed for maintaining information if there were any record at all associated with the collected specimens. For example, the major portion of the collection of the ethnographical specimens of the then Asiatic Society Museum collected before 1849 had lost their value as they were not properly labelled with adequate information. As a result of making collection unsystematically mostly by the non-anthropologists, the ethnographical collections in the museums of India were developed primarily as curious. Referring to the collection of the Indian Museum, it was rightly observed in the publication *The Indian Museum—1814-1914* (p. 28, 1914 Calcutta) that "It is not possible to claim for either the ethnographical or the strictly anthropological collections that they have ever formed the basis of research in the same manner or to the same extent as the Zoological collections have done." The ethnographical collection only received due attention from time to time when the museums were administered by the scholars interested in anthropology. At the initial stage, the significant development of the ethnographical collection of the Indian Museum and the Madras Museum were witnessed when these two Museums were under the care of Dr. Anderson and Mr. Thurston respectively. This collection of the Indian Museum was boosted up again around 1910-11 when Sir Herbert Risley an eminent figure in Indian anthropological field was the Chairman of the Board of Trustees of the Indian Museum, and in 1926 onward when Sewell was the Director of the Zoological and Anthropological section of this Museum. The Part played by Dr. Gravelly and Dr. Aiyappan in developing ethnographical collection of the Madras Museum was also outstanding.

### Display arrangement and storage of ethnographical specimens in the museums

Inadequate attention was paid for proper storage and upkeep of the ethnographical specimens in the early stage. As a result many ethnographical specimens of the Asiatic Society of Bengal collected before 1849 were badly damaged due to faulty storage in dark and damp rooms. Though the Indian Museum as 'Imperial Museum' was thrown open to public in its building in 1875, a separate gallery for Anthropological Section was opened for the first time in this museum only in 1893. It was also observed that the first ethnographical gallery of the Indian Museum was very much crowded so far as display was concerned, and little storage space was available for the sectional reserve collection. Like the Oriental Museum of the Asiatic Society, the ethnographical specimens of the Central Museum (Nagpur) were also initially displayed in the same gallery with the archaeological specimens.

As to the nature of anthropological collection developed in the museums of India during the British period, it was found that the physical anthropological specimens could not be treated in any other museums except Indian Museum and Madras Museum. Actually there was no scope of developing physical anthropology in Indian museums as most of them had rare opportunity of developing their anthropological collections under the initiative of competent anthropologists. Anthropological collections in most of the museums were built up in association with art and archaeological specimens under the non-anthropologists. Prehistoric collections were mostly associated with the Archaeology Section. As a result in tracing out the history of development of the anthropological collection in the museums of India, only ethnographical collections have been taken into account.

### CONCLUSION

The history of development of ethnographical collection in the museums of India reveals their inadequate and unbalanced development from the anthropological point of view throughout the British period. The negligence that was shown in anthropology was observed from the very beginning. In this respect Dr. Anderson in the *Annual Report* of the Indian Museum (1881-82) wrote that :

"The subject of ethnology in many of its departments has hardly been touched, when we consider the exhaustive manner in which the science is handled by the great museums of the leading capitals



of Europe, some of which can clearly boast of more complete collections of ethnology of India than the Calcutta Museum itself."

What Dr. Anderson wrote in 1881-82 remained true till 1936 when in the Report of the Museums of India (1936) Markham and Hargreaves stated that besides the Indian Museum "the Madras Museum, Nagpur Central Museum and Baroda Museum also have interesting ethnological collections. The rest of the museums in India either completely ignore ethnology or have a few ethnological exhibits in their Industrial or Archaeological Sections. This is all the more regrettable as nowhere in the world are there greater opportunities of procuring representative and complete records of races still in all stages of cultural development."

Commenting on apathy towards anthropology, S. C. Ray, an eminent ethnographer of his time, forwarding the *Journal of the Indian Anthropological Institute*, Vol. 1, Nos. 1 & 2, 1938 wrote that "unfortunately the progress of systematic work on the physical and cultural traits of Indian people has not been keeping with the promises given at the initial stage. This is due in a great measure of discontinuance by the Government of Ethnographic Survey of India so well begun under Sir Herbert Risley and lack of interest shown by the educational institutions in India to anthropological study in general".

Observing the petiable condition of anthropology in the domain of the museums of India, J. H. Hottun, an eminent British anthropologist working in the Indian field commented in his presidential address entitled *Future of Anthropology in India* at the annual meeting of the Indian Anthropological Institute held in Calcutta on January 5, 1938 :

"Meanwhile there is a mass of material objects all over India which needed to be gathered and preserved in museums while they are still available for collection and in order to preserve them, trained experts are wanted in charge of all museums. It is useless to collect specimens which are doomed to perish within a few years, because no suitable method of preservation can be applied to them. Men trained in museum technique are badly needed for this purpose. But like so many other requirements can be had only if fund for their training can be found. A regular campaign is needed to persuade the wealthy to give freely for the purpose of ensuring that the rich inheritance of this generation from the past, shall not perish in India for want of men trained to preserve it."



## R. D. BANERJEE AND HIS CONTRIBUTION TO THE STUDY OF INDIAN ICONOGRAPHY

SAMIR KUMAR MUKHERJEE

**R.** D. BANERJEE (1885-1930) occupies an important place in the annals of Indian archaeology for his brilliant contribution in different branches of Indian history. Study of iconography received equal attention from Banerjee. Before being transferred to the Western Circle, Archaeological Survey of India, Baroda in 1917, he had the opportunity to study the collection at the Indian Museum, Calcutta, while working as an Archaeological Assistant and later as Assistant Superintendent, Archaeological Survey of India, between the years 1910-1917. In fact, he was initiated into the study of the Indian Museum collection, specially of the Pāla and the Sena period by Dr. Theodore Bloch of the A.S.I. Well-versed in sanskrit and adequately equipped in texts and treatises on iconography, Banerjee had a deep penetrating eye and keen incisive analytical faculty like a true archaeologist. While serving as the Superintending Archaeologist of the Western Circle, Baroda, between the years 1917-1923, he undertook extensive exploration in many sites covering wide regions like the then British Jubbulpur, Indian States of Rewa, Nagod and Maihar—all now in Madhya Pradesh, extending from the southern banks of river Tons to the banks of Narmada and these explorations resulted in the discovery of rich crop of sculptures, architectural fragments, images and temple. As far as the identification and interpretation of the images are concerned, Banerjee's approach did not differ much fundamentally from his predecessors like Alexander Cunningham and J. D. M. Beglar, who visited some of the sites many years ago.

Banerjee's approach of identification was to correlate the images both with the textual references as well as with the parallel examples available from other sites. Besides adopting the prevailing practices, he attempted to correlate the images, bas reliefs and sculptures found in untrodden and unknown sites to the nearby temples or monuments to which these belonged originally. In determining dates of images, he attempted to deduce dates from the references to them to contemporary inscriptions. He laid equal emphasis on inscriptions found on the images as a clue in determining their dates. How much Banerjee depended on images and sculptures having dates on them can be gathered from his statement in the chapter entitled "Images and Sculptures" in his monumental book on "Haihayas of Tripuri and their monuments", written as early as 1922 (published in 1926). He writes, "It is extremely difficult to arrive at any precise conclusion regarding the date of the images and sculpture discovered in the tract, which was known to the ancients as Dahala, because, in the majority of case, the images are without any inscriptions and therefore there are no supplementary data, on the basis of which any satisfactory conclusion regarding their dates can be arrived at"<sup>1</sup>. His attempt of ascertaining date of images on the basis of reference available in inscription can be illustrated best by two examples from his finds at Gurgaj Mound at Gurgi, Rewa. Here Banerjee in course of his searching operation noticed two interesting images on surface of a terrace, which he found "still lying which could not be removed on account of their great weight"<sup>2</sup>. The first of this is an image of Śiva and Durgā, 13' in length and 5'4" in breadth. He further adds, "Unlike other images of Śiva and Pārvatī, usually to be found in Northern India, because in



this image Śiva is not seated with Pārvatī on his lap, but both are standing side by side, with hands around each other's shoulders". In the Gurgi inscription, this image is styled as "Umā mixed with Śiva (Hara-Gouri) (*Umayā cha miśram-iśam*).<sup>3</sup> This image, according to Banerjee, is the same which was dedicated by the abbot Prasantaśiva in some of the smaller temples around the great temple which is referred to in the Gurgi inscription as being dedicated in the houses of gods close to the Palace of Śiva (*Prāsāda-sannihita-deva-grheṣu*).<sup>4</sup>

The second image found on the other part of the same terrace on the Gurgaj mound lying "still in an upright position" was that of Umā, seated on a lotus in the *arddha-paryāṅka* posture.<sup>5</sup> This image, like the one described above, was dedicated by the abbot Prasantaśiva around the great temple of Śiva and is described as Umā in Gurgi inscription.<sup>6</sup> The date of these images therefore be safely fixed from the statements in the Gurgi inscription. The above images have been dated to the second quarter of the tenth century by Banerjee.

The two examples, cited above, illustrate the attempt of Banerjee to correlate the icons with their references in the inscription found at the site itself as well as their actual relationship with the temple to which these images originally belonged to.

Banerjee did not discover Brahmanical images only in the region under discussion. He discovered incredible number of Buddhist and Jain images, sculptures and architectural fragments, which he described in detail in his report on "Haihayas of Tripuri and their monuments", this being the first attempt ever done at his time on this little known ruling dynasty in Madhya Pradesh.

Banerjee ever refuted some of the identification of images upheld by his predecessors on revisit to some of the sites. At the same time, he identified and established new image, unknown till his time. In identifying images, as well as ascribing dates, Banerjee primarily depended more on inscription than on stylistic consideration. As regards new identification, the image of Vāgīśvarī belonging to the reign of Gopala II may be cited.<sup>7</sup> The image has been identified by Banerjee on the basis of inscription on its pedestal. The affiliation of the deity to the Buddhist pantheon has been questioned by some scholars, since no textual corroboration of the deity is available till now. Banerjee's identification of the deity therefore still remains valid and accepted.

Another notable addition to our knowledge about the temple architecture as well as images of the classical period of Indian history was the discovery of Bhumārā temple formerly in Nagod State (now in the district of Panna, Madhya Pradesh). Of course, the credit of discovery of the temple goes to the two technical staff members of the Western Circle, A.S.I. as early as January, 1920.<sup>8</sup> Banerjee as the Superintendent of the Western Circle explored the site which resulted in the discovery of a large number of sculptures, pillars and pilasters and a rich crop of other architectural fragments, both lying scattered and standing at the site and he studied them in detail. The temple as pointed out by Banerjee was essentially the same in plan like that of Pārvatī temple at Nachhna Kuthara, having a sanctum (*Garbhagrha*) covered by a circumambulatory passage (*pradakṣinapatha*). The interpretation of the temple as being flat roofed in character has been questioned by Dr. Promode Chandra after the discovery of more or less intact contemporary Gupta temple of Vāmaṇa at a village named Maria Kalan in Jabbalpur District, Madhya Pradesh.<sup>9</sup>

The Ekamukhalinga (phallus with one face) that was enshrined once in this beautiful temple as being the principal object of worship is one of the masterpieces of Gupta art.<sup>10</sup> Parallel examples have been discovered subsequently in Madhya Pradesh. Best available examples come from the Asian Art Museum of San Francisco, the Avery Brundage collection and private collection of Mr. and Mrs. James W. Alsdorf, Chicago, U.S.A.<sup>11</sup> Banerjee draws striking resemblance to a similar Ekamukhalinga discovered by him



almost at the same time at village Khoh in the Nagod State, which is also ascribable to the same period.<sup>12</sup>

The most exquisite decorative work that deserves mention in Bhumara temple consists of a group of deities, exhibited in the *chaitya*-window decoration, known in this period as '*chandraśilā*'. It is very likely that these embellished the superstructure of the temple. The design and scheme of ornamentation with beads and crisply-carved scrolls appear to be the characteristic feature of the Gupta period. The deities exhibited in the centre roundels are Indra, Brahmā, Gaṇeśa, Kubera, Kartikeya, Sūrya, Mahiṣa-mardini and others.

Another interesting series that deserve attention are the stone slabs, oblong in shape, having carvings on one side only. The carvings primarily consist of floral decoration and meandering wish-fulfilling creeper, fine arabesque medallions, half-lotus medallions and *Kīrtimukhas* with figures of *Gaṇas* intertwined, the latter displaying bewildering variety of attitudes and poses.<sup>13</sup>

The main gateway of the temple like the other gateways of the period under discussion shows *Gaṅgā* and *Yamunā* on their respective vehicles with attendants figures, holding an umbrella and celestials fluttering above.<sup>14</sup> The central figure that dominates the centre of the lintel is a bust of Śiva with *Vidyā-dharas* flying towards him on either side with offerings. A mutilated figure of Gaṇeśa seated in the round found here also deserves notice.<sup>15</sup>

Banerjee did not confine himself only to identifying major images in stone but also directed his attention to identify deities represented through minor antiquities like terracotta plaque and stone. This is evident from his identification of a terracotta plaque collected by one Major B. D. Basu of Indian Medical Service (Rtd.) from the site of Kosam (ancient Kaushambi, U.P.) as early as December, 1908. The plaque, measuring 6"×4" depicts Śiva and Pārvatī, standing side by side. In identifying the said plaque, he drew analogy to this to a similar stone sculpture of Śiva-Pārvatī from Kosam, now in the Indian Museum collection. In his brief report entitled "Some sculptures from Kosam" (Ref: *Annual Report*, A.S.I., 1913-14, pp. 262-64), he even produced the photographs of both the images side by side to bring out the striking resemblance that exists between the two. He writes "Its resemblance to the stone image of Śiva and Pārvatī from Kosam, dedicated in the 139th of G. Era is so striking that I have no hesitation in calling it an image of Śiva and Durgā.<sup>16</sup> He also identified a beautiful male head of red sandstone, evidently of Mathura, which belonged to a Jaina image. The elongated ears and small circular mark (*tika* ?) in the centre of the forehead strengthened his supposition.<sup>17</sup>

Banerjee showed unique expertise in undertaking comprehensive studies in regional style and theme reflected through available sculptures and images within a particular zone. The idea of studying the Pāla and Sena sculptural remains from Eastern India as a "seperate artistic development" dawned in the mind of Banerjee as early as 1907.<sup>18</sup> He had the opportunity to study the materials at his hand while posted both as an Archaeological Assistant, Indian Museum, Calcutta; Assistant Superintendent, A.S.I. between the years 1910 and 1917. Prior to Banerjee, the first attempt to publish the materials of the Pāla-Sena period in the collection of Varendra Research Society, Rajshahi, in a descriptive form was done in 1919 by R. G. Basak and D. C. Bhattacharya.<sup>19</sup> N. K. Bhattasali laid more emphasis on religious development during the period under review and did not deal much with style and chronology.<sup>20</sup> Another pioneering attempt in this direction was done by Stella Kramrisch as early as 1929. The attempt of Kramrisch is indeed a pioneering venture emphasising primarily on stylistic evolution of art in this period, besides being the study of iconography in general.<sup>21</sup>

Banerjee's approach and view point were to some extent ahead of his time. Besides identifying the images, he laid more emphasis on inscribed images, dated or undated, found in different places in Bengal and Bihar as the very nucleus for the study of the development of art in Eastern India. Images, without



having inscriptions on them had also been studied on their stylistic consideration in relation to the inscribed images. After establishing the chronology available from the materials, he grouped them according to subject-wise and iconographic representation-wise and discussed these in exhaustive details, citing references to these from the texts. Keeping in view of the time, the endeavour of Banerjee deserves praise and admiration. It added not only a new chapter to our knowledge of the variety of icons—Brahmanic, Buddhist and Jains of the Pāla and the Sena period, it sets a new norm, standard and methodology for the first time towards the study of art and iconography in eastern India. In most cases, his identification is beyond any controversy. It is through his pioneering effort that we are now in a position to say that in medieval time Bengal specially the eastern India under the rule of the Pālas and the Senas had a distant iconoplastic diction and style of her own. His identification and approach towards this direction set a norm to many archaeologists and art historians of future generations. The criticism levelled by Mrs. Susan Huntington that Banerjee based most of his judgements on the Indian Museum examples only and “failed to include enough specimens in other collections to make his study truly comprehensive”.<sup>22</sup> The view expressed by Mrs. Huntington cannot be treated as a serious lapse in view of the limitations and circumstances in which Banerjee made his pioneering venture in the early twenties of this century.

Banerjee's commandable knowledge of the source materials in the form of inscriptions, coins, seals and images available till 1924, reflecting on religious beliefs and practices of the Gupta kings, are best exhibited through his series of six learned lectures delivered by him at the Benaras Hindu University in November, 1924.<sup>23</sup> He was one of the pioneers to highlight the religious affiliations of the Gupta kings and to write a comprehensive history on them as early as 1924. While he was busy in editing the manuscript in 1929 and bringing the work up-to-date, he met with a premature death in May, 1930.

## NOTES

<sup>1</sup>Mem. A.S.I. No. 23, p. 72.

<sup>2</sup>Ibid, p. 76.

<sup>3</sup>Ep. Indica, Vol. XXII, p. 130.

<sup>4</sup>Ibid., p. 130.

<sup>5</sup>Mem. A.S.I. No. 23, p. 77, Pl. XXVII (a).

<sup>6</sup>Ep. Indica, Vol. XXII, p. 130.

<sup>7</sup>Banerjee, R. D., “Eastern School of Mediaeval Sculpture”, A.S.I., New Imperial Series, XLVII, Pl. IV (a).

<sup>8</sup>Progress Report, A.S.I., Western Circle, 1919-20, p. 107.

<sup>9</sup>Chandra Promod, “A Vamana temple at Maria and some reflections on Gupta architecture”, *Artibus Asiae*, Vol. LXXXII, pp. 142ff.

<sup>10</sup>Mem. A.S.I., No. 16, p. 5, pl. XV (c).

<sup>11</sup>Pal, Pratapaditya, *The Ideal Image*, Washington, 1978, p. 60, pl. 6; p. 101, pl. 51.

<sup>12</sup>Progress Report, A.S.I., Western Circle, 1920, p. 106, pl. XXX.

<sup>13</sup>Mem. A.S.I., No. 16, p. 8f, pls. IX, X, XI (a).

<sup>14</sup>Ibid., p. 5f, pl. III (a), p. 5.

<sup>15</sup>Ibid., p. 5, pl. III (b).

<sup>16</sup>Report A.S.I., 1913-14, pp. 262ff., pl. LXX (b).

<sup>17</sup>Ibid., pl. LXX (c).

<sup>18</sup>Banerjee, R. D., *Eastern School of Mediaeval Sculpture*, New Imperial Series, V, 1933.

<sup>19</sup>Basak, R. G. and Bhattacharya, D. G., *Catalogue of the Archaeological Relics in the Museum of the Varendra Research Society*, Rajshahi (Rajshahi, Varendra Research Society), 1919.

<sup>20</sup>Bhattachali, N. K., *The Iconography of Buddhist and Brahmanical Sculptures in the Dacca Museum*, Dacca, 1929.

<sup>21</sup>Kramrisch, Stella, *Rupam*, No. 40, 1929, pp. 107-26.

<sup>22</sup>Huntington, Susan, *The Pala Sena Schools of Sculpture*, Leiden, 1984, p. 5.

<sup>23</sup>Banerjee, R. D., *Age of the Imperial Guptas*, Benaras Hindu University, Benaras, 1933.

\*Paper presented at a seminar held at the National Library, Calcutta on the 7th December, 1985 in connection with Birth Centenary Celebration of Rakhal Das Banerji organised by the School of Historical and Cultural Studies, Calcutta.



## EVIDENCE OF SUNDERBAN BUFFALO *BUBALUS BUBALIS* LINNAEUS, FROM CANNING, WEST BENGAL—FEEBLY INDICATIVE OF A SACRIFICE

MANOMAY GHOSH

SOMETIME in July '85, remains of a complete skeleton of some large beast was discovered buried 2.5 meters below surface, during renovation of a pond in the village of Tangrakhali in Canning P.S. of West Bengal. The place is about 50 Km. South-Southeast of Calcutta and is situated in the periphery of deltaic Sunderbans. Once the Sunderbans embraced an extensive area and was the habitat of varied wild animals, some of which are extinct now.

So, it was decided to survey the spot and to collect the interesting remains for study. Accordingly on 13.8.85, the author, accompanied by Shri A. K. Sardar, a resident of the place, drove down to Tangrakhali and collected a part of the material, which were already procured and preserved by Sri Sardar's family. The remains, on formal examination, appeared to belong to some bovine animal. Unfortunately, most of the remains were re-buried by the labourers out of prejudice and the pit was submerged under waist deep water by the time we reached the spot. The pond is situated inside the campus of local Bankim Chandra Sardar College. Local people reported that the pond was dug only thirty years ago. The people also reported that they were perplexed to see an arch or dome like structure of a ruined temple that peeped out 3 meters below the centre as a result of the removal of the overlying soil during the early excavation. The superstitious people stopped the work temporarily, but continued later to dig the rest of the area around and the peering temple-like structure disappeared amidst the pond. The people on my query denied pre-existence of any cattle shed there. The spot was also never used as a carcass dump. The present settlement dates back to 250 years. But none of the villagers could throw any light either on the temple in oblivion or on the occurrence of the buried skeleton from the site. According to them, the area was used as a paddy field till three decades ago and prior to present century the place was very isolated and was covered with thickets.

However, it is quite certain that this part of lower Bengal was once indistinguishable from the Sunderbans tract and similar vegetation (Littoral-forest type) was predominant. As a reminiscence, the local farmers even at present, very often encounter impregnated decaying stumps of mangrove plant species, specially that of 'Sundri' (*Heritiera minor*). So, all these factors make the occurrence of the bovine skeleton very much significant from the archaeo-zoological points.

*Material:* One rib fragment (6th rib of left side); six vertebrae (4th cervical, 6th cervical, 1st thoracic, 4th, 5th & 6th thoracic); one broken left scapula; obecranon process of left ulnar bone; one complete lower jaw with 2nd and 3rd premolars, 1st to 3rd molars on each side.



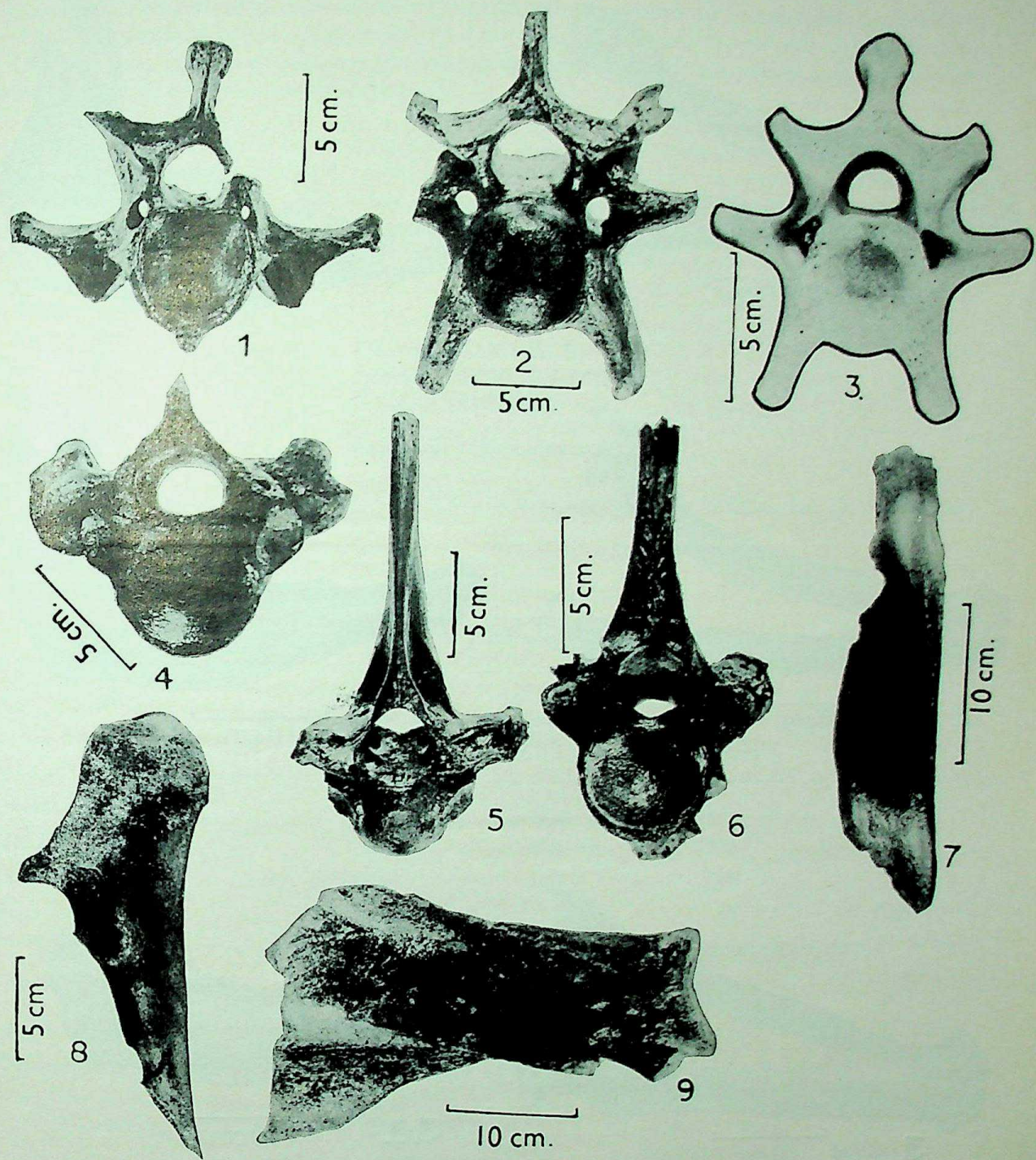
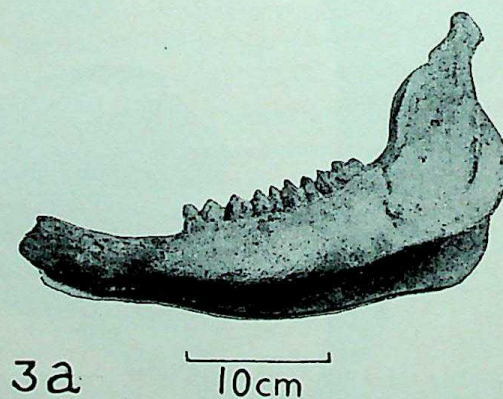
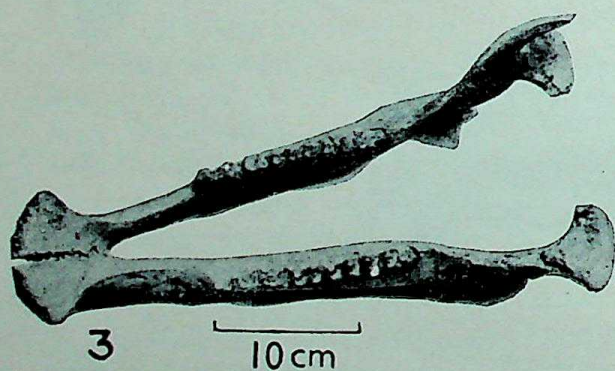
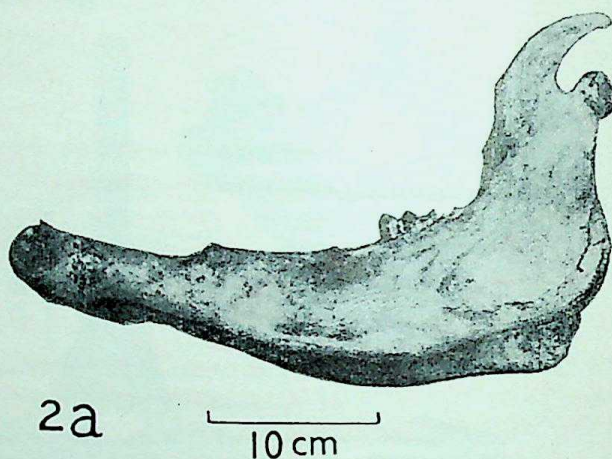
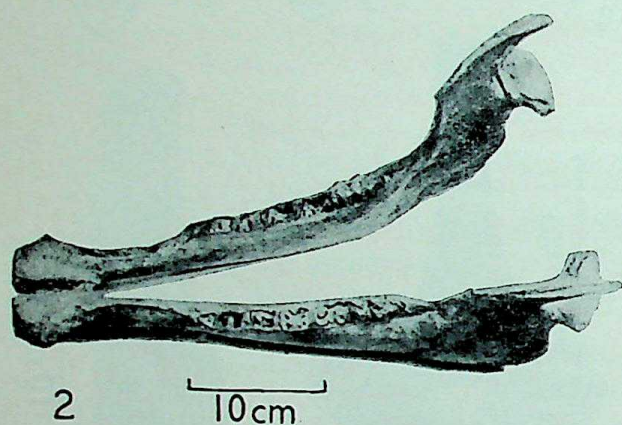
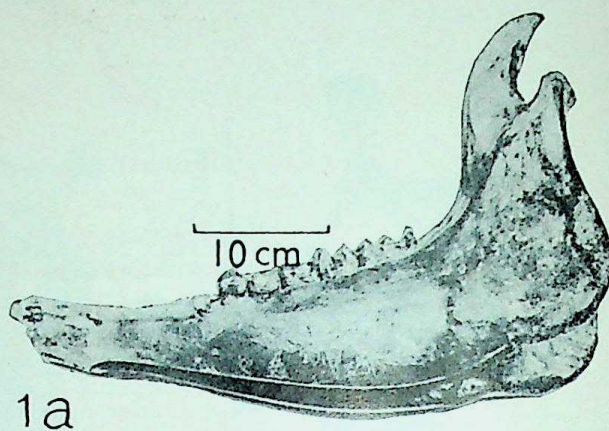
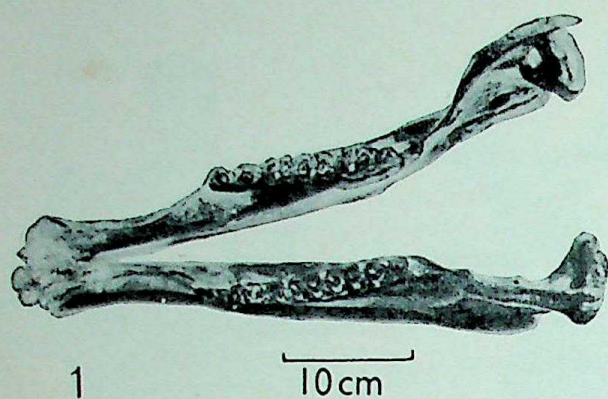


PLATE I

- Figs. 1 and 2: 4th & 6th cervical vertebrae of Tangrakhali specimen.  
 Fig. 3: 6th cervical vertebra of a domestic adult buffalo.  
 Figs. 4-6: 1st, 4th & 6th thoracic vertebrae of Tangrakhali specimen.  
 Fig. 7: Fragment of 6th rib of left side of Tangrakhali specimen.  
 Figs. 8 and 9: Broken left scapula of Tangrakhali specimen.





# PLATE II

Figs. 1 and 1a

Lower jaws of Tangrakhali specimen, showing dorsal and lateral views respectively.

Figs. 2 and 2a

Lower jaws of wild, adult male buffalo (Reg. No. 16880) in the repository of Z.S.I., showing dorsal and lateral views respectively.

Figs. 3 and 3a

Lower jaws of wild, adult male buffalo (Reg. No. 16878) in the repository of Z.S.I., showing dorsal and lateral views respectively.



*Chronology:* The greater portion of the calcium phosphate contents in the remains are found unaltered and the majority of the spongy cells remained porous. Obviously the remains appear to be not old. However from the rate of surface carbonisation and from accumulation of overlying soil (silt), the remains assumed to be 3 to 4 hundred years old.

*Identification:* The remains belong to a single adult individual, approximately 5-6 years old and very likely a male buffalo. The jaw bones, limb bones and vertebrae were very much robust than those of domesticated specimens. The height of the thoracic spines couldn't be ascertained as they were broken. But it is assumed that they were quite long. The cheek teeth were well-developed and the cusps were unworn. The remains were compared with two adult wild buffalo specimens and with one adult domestic specimen kept in the repository of Z.S.I. and were found to resemble the wild forms closely. The systematic position of the animal is:

Class: MAMMALIA  
Order: ARTIODACTILA  
Family: BOVIDAE

*Bubalus bubalis* (Linnaeus)

Comparison of the specimens with relevant bones in wild and domestic buffaloes are given in tabular forms below:

TABLE I

**Comparison of the jaw bones with wild and domestic buffaloes (in mm)**

Topography	Specimen No. 16878 (Z.S.I.)	Specimen No. 16880 (Z.S.I.)	Specimen from Tangrakhali	Specimen of domestic buffalo
Horizontal Length	430	480	470	420
Vertical Height	244	258	260	245
Diastema	152	160	153	146
Condylar Width	59	64	62	45

TABLE II

**Comparison of the cheek teeth with those of domestic and wild buffaloes (in mm)**

Tooth catagory	Tangrakhali specimen	Domestic buffalo	Wild buffalo
Cheek teeth: Total length	175	145	169
Maximum length of $M_1$	30	25	28
-do- -do- $M_2$	35	29	33
-do- -do- $M_3$	52	40	54



TABLE III

**Comparison of the limb bones with those of domestic buffalo (in mm)**

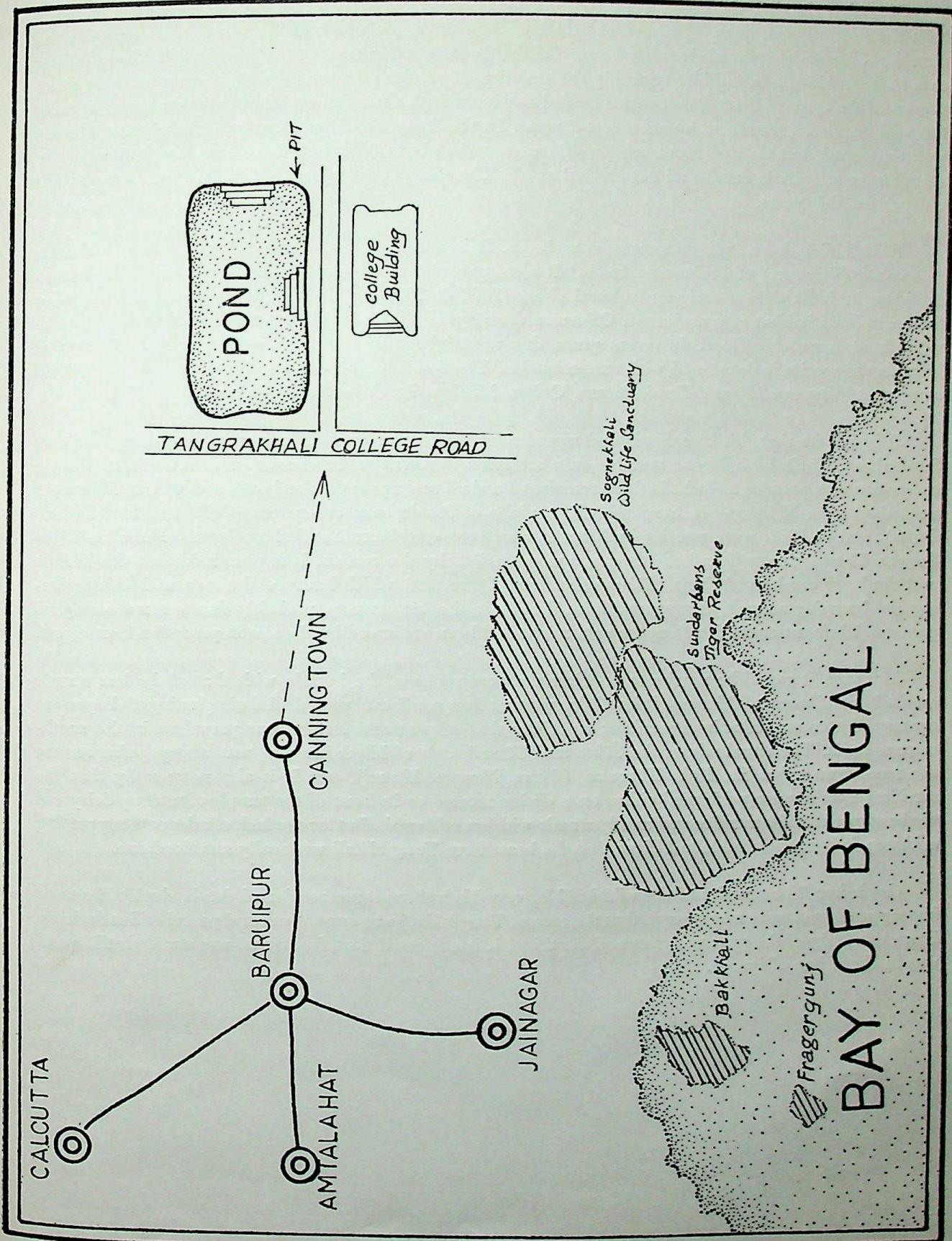
Topography		Tangrakhali specimen	Domestic buffalo
Olecranon process with notch	{Width	43	34
	{Breadth	74	53
	{Height	124	118
Scapula glenoid	{Length	80	61
	{Breadth	67	46
Neck	{Length	80 & 96	64 & 76
	{Breadth	31	28
Spine	Elevation	57	35

TABLE IV

**Comparison of the rib and vertebrae (in mm)**

Topography		Tangrakhali specimen	Domestic buffalo
Rib	{Maximum width	16	10
	{Maximum breadth	80	68
Vertebra 4th C	{Body length	90	67
	{Wing span	184	130
	{Height	153	110
6th C	{Body length	86	75
	{Wing span	133	124
	{Height	155	125
1st T	{Body length	71	55
	{Wing span	126	102
	{Height	110+	226
4th T	{Body length	88	52
	{Wing span	112	94
	{Height	98+	260





MAP SHOWING THE LOCATION OF TANGRAKHALI AND THE PIT WHERE THE SKELETON OF BUFFALOW WAS RECEIVED



*Discussion:* In size, the bones from Tangrakhali resemble the wild forms and are significantly larger than the domesticated form. The vertical height of the ramus, the width of the mandibular condyle, the elevation of scapular spine and assumed length of the thoracic spines suggest that the skeleton likely belong to a male specimen. In buffalo, generally the eruption of all the permanent teeth is completed by three years and the cusps of the molars become eroded slowly through abrasion and the resultant crowns become flat with exposed cementum by another 4-5 years. In the Tangrakhali specimens all the cheek teeth are well developed, but no significant erosion of the cusps has been observed. Moreover, the suture in the mandibular symphysis was found not ossified at all. Therefore, it is apparent that the specimen was not older than 6-7 years.

Wild buffalo is an indigenous species to India. It is a descendant of the extinct progenitor *Bubalus palaeindicus* (Falconer) of Pleistocene India. It also gave rise to the present-day breeds of domesticated buffaloes in India during early agricultural phase (2000 & 3000 B.C.). Wild buffalo generally stays in hard within its habitat of grass jungle. Of course during prolonged draught it sometimes migrates to cultivated land in search of food. In recent years, due to shrinkage of habitat, poaching and environmental hazards the species is threatened with extermination. The fractional population of the buffalo is restricted at present in parts of Nepal, Terai, Assam, Orissa, Madhya Pradesh and Maharashtra.

It is definite that this courageous and most strong bovine was once abundant in the grassy jungle of Sunderbans. Their buried bone remains only are left at present to be encountered sometimes during excavation of a pond or a ditch. In 1980 remains of a skull and appendicular bones of a wild buffalo were unearthed from Kalinagar in Sandeshkhali, a niche of Sunderbans eco-system (Collector, Shri Dhiren Dutta), and in 1981, some massive limb bones were recovered from Sunderbans by the Director, Tiger Project. The specimens from both the place were studied by the author. It is presumed that this buffalo and the lesser one-horned rhino (*Rhinoceros sondaicus* Desmerest) which haunted the area with other grazing and browsing animals, disappeared from the site in the last century, probably due to some ecological pressure. Their extermination from the area might had been enhanced by the rise in predation from tigers.

However, it would be unwise to co-relate the occurrence of the buffalo with that of the lost temple on the basis of hearsay. Of course it is well-known that from mediaeval period till the beginning of the present century, the custom of animal sacrifice; especially that of goat and buffalo was prevalent in the north-eastern India. The ritual relates the Śākto and Tāntrik cult of Hinduism and was also popular among the non-Aryan tribes like Kols, Kharwar, Cheros, Newars, Bhumij, etc. It is also noteworthy that the sacrifices usually were performed either on a divine mound or in front of the temple of tutelary deity and the beast preferred for sacrifice was mostly a male with sound health. But for the lack of adequate supporting evidence, it is unconceivable to believe that the beast from Tangrakhali was really sacrificed one.

*Conclusion:* The remains of the wild buffalo, very likely from some accidental death, depict like those impregnated mangrove tree stumps, that the area of Tangrakhali was once a part and parcel of Sunderbans. From the study of the massive bones and dentition, it is conjectured that the animal was a male buffalo and was in the prime of its age.



## CULTURAL ZONES IN LOWER PALAEOLITHIC WEST BENGAL

ASOK DATTA

### Introduction

CULTURE as an extra somatic adaptive mechanism of man appeared for the first time during the early part of pleistocene period. The vestiges of this cultural materials are found mostly in the form of stone tools all over the old world.

It is not really known about the origin, diffusion, distribution and change of this cultural materials. There are two hypothetical possibilities. One suggests that culture made its appearance at one specific point and later on with time moved with the people in different directions. The second hypothesis strongly suggests different centres at different times as the places of origin of this culture. And thus suggesting a multi-origin instead strictly a single place of origin. This second hypothesis seems to be more logical specially in view of the recent numerous publications of materials suggesting the maximum coverage in terms of space of this culture in the old world. This spatial coverage would have been not possible if the origin and diffusion of this culture was made from a specific point of area. Hence the first hypothetical possibility can be ruled out.

The material evidence of this period is known as palaeolithic culture with its three main sub-divisions viz. lower, middle and upper palaeolithic periods. This kind of culture sequence within the broad canvas of Palaeolithic period has also been established in India. The recognition of three-fold division of palaeolithic culture in India is a significant and recent development in the Indian stone age culture.

Again within palaeolithic culture, there is a good deal of variation in the industrial components, and this variation differs from region to region. These differences will be less when any two closely located sites are placed together, but in case of widely separated sites, these differences in terms of typo-technology, frequency of tool types etc. will be maximum. This inconsistency in the industrial components of any culture is mainly due to environments, geographical elements and surface geology etc. The overall differences are found in the form of typology, technology and percentile coverage of each major tool types. This kind of situation is found to be present in almost all over the old world. A careful analysis of the above basic materials will bring out the culture zones within a particular area which on the other hand can provide a good deal of information relating to cultural behaviour of that particular area. On the other hand, the cultural variability within an area can also provide information relating to environmental differences of that particular area. This is apt when we find that one particular type of cultural material may be required to meet one specific type of environment, while other types are less important to other type of environment. These environmental differences are very important to understand the pattern of cultural behaviour of a particular area. In the present context our prime objective is to understand the cultural variability in West Bengal during lower palaeolithic period. In doing so, we have to examine also how and to what extent the environment influenced the cultural pattern of our



early ancestors in this part of India since cultural behaviour is largely depended on environment, and thereby to find out the culture zones in West Bengal.

### Materials

The distribution of palaeolithic sites in West Bengal is found to be concentrated over the compact area of south-western part of the State. The areas roughly covered by the districts of Purulia, Bankura and south-western part of Midnapur are particularly spotted with palaeolithic sites including lower, middle and upper. This area is composed of an old landmass attached with Chotonagpur fringe area—an area that is surrounded by the natural environment which served as an ideal habitat for the palaeolithic habitation. In West Bengal there are altogether 162 lower palaeolithic sites and they are all open air sites. The total number of tools compiled here are 5,800 and they represent the total compact area in West Bengal. On the basis of distribution of sites (Fig. No. 1) a number of cluster of sites have been found and on the basis of the same the total palaeolithic area in West Bengal has been divided into four major regions. The regions are; (a) Susunia (b) Laljal (c) Suvarnarekha (d) Purulia.

The basic tool types of all these areas are Choppers, Hand-axes, Cleavers and Scrapers. But since the distinction between choppers and scrapers are superficial and *at times confusing too* (Datta, 1982), the scrapers have been excluded from the final analysis. As a matter of fact, the lower palaeolithic choppers and scrapers are hardly possible to distinguish specially in view of their morphological features. All the three major types namely choppers, hand-axes and cleavers are found to occur in all the above four regions with variable degrees and proportions excepting Purulia where choppers are completely nil. The percentile distribution of the three major types are shown below (Table No. 1).

Table No. 1 Showing the percentile distribution of Major Types:

Sl. No.	Name of the Region	Choppers	%	Hand-axe	%	Cleaver	%	Other	%	Total	Total no. of Tools
1.	Survarnarekha	400	25	910	57%	290	18%	—	—	100%	1600
2.	Susunia	15	1	1470	98%	15	1%	—	—	100%	1500
3.	Laljal	273	13	1300	62%	399	19%	128	6%	100%	2100
4.	Purulia	—	—	384	64%	120	20%	96	16%	100%	600
Total		688	—	4064	—	824	—	224	—	—	5800

From the analysis of the above table it appears that hand-axes are the most popular type in West Bengal during lower palaeolithic period. In fact, in each major regions, the hand-axes are always found to be present with more than 50% in the total collection. In the total collection of 5,800 tools, hand-axes consist of 4,064 specimens which alone speaks the significance of this type in West Bengal palaeolithic environment. The cleavers are found to be present in all the four regions with variable degrees and proportions while choppers are found totally absent in Susunia region. A percentile distribution (Fig. No. 2) shows that the highest concentration of hand-axe is found around Susunia followed by Purulia and Laljal while it further decreases around Suvarnarekha region. In case of cleaver, the distribution pattern (Fig. No. 2) shows that the highest concentration of cleaver is found in Purulia region followed by Laljal and Suvarnarekha while it is almost nil in Susunia region. The distribution pattern (Fig. No. 2) of chopper shows that the highest concentration is found in Suvarnarekha region followed by Laljal. It is almost nil in Susunia and completely absent in Purulia. A further superimposition of distribution pattern of different types has been made (Fig. No. 3) to bring out the cumulative results of interactions



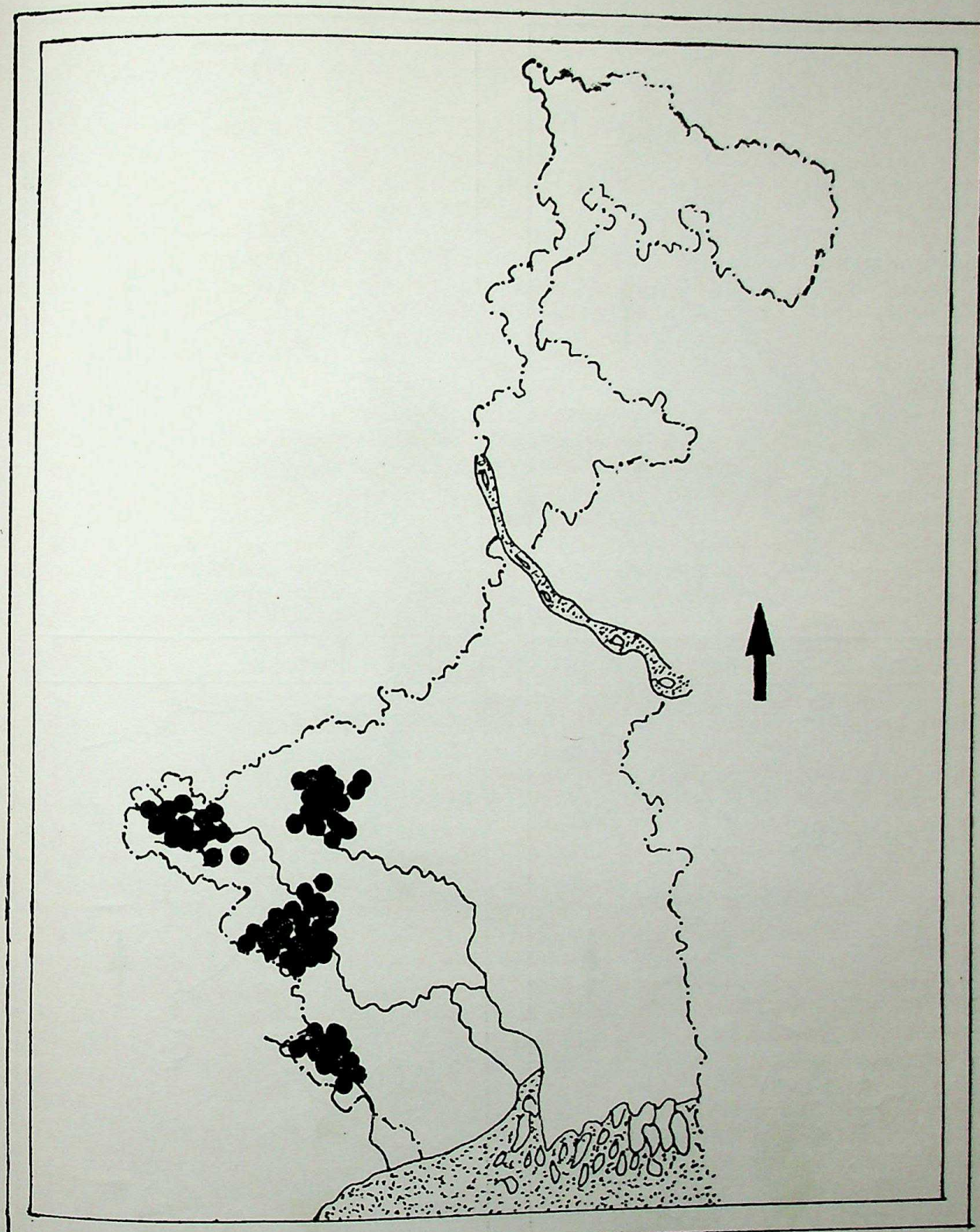
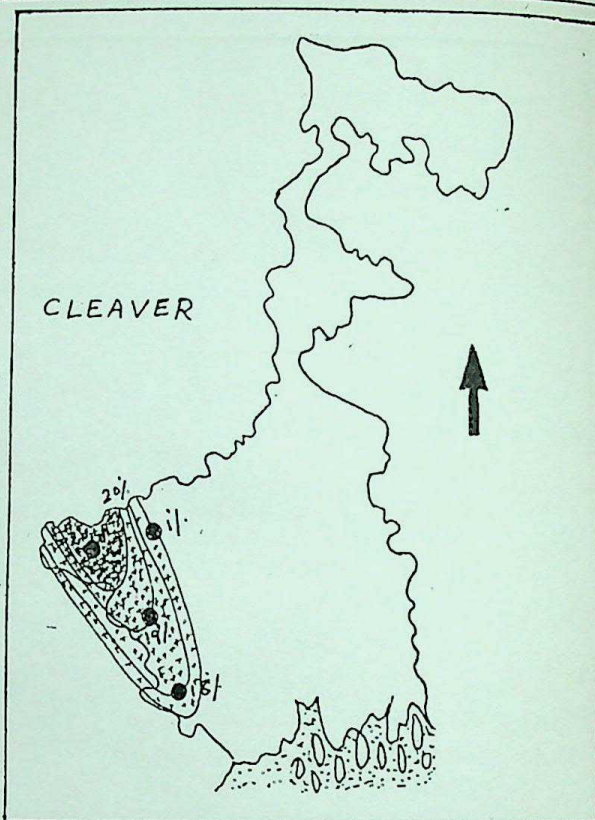
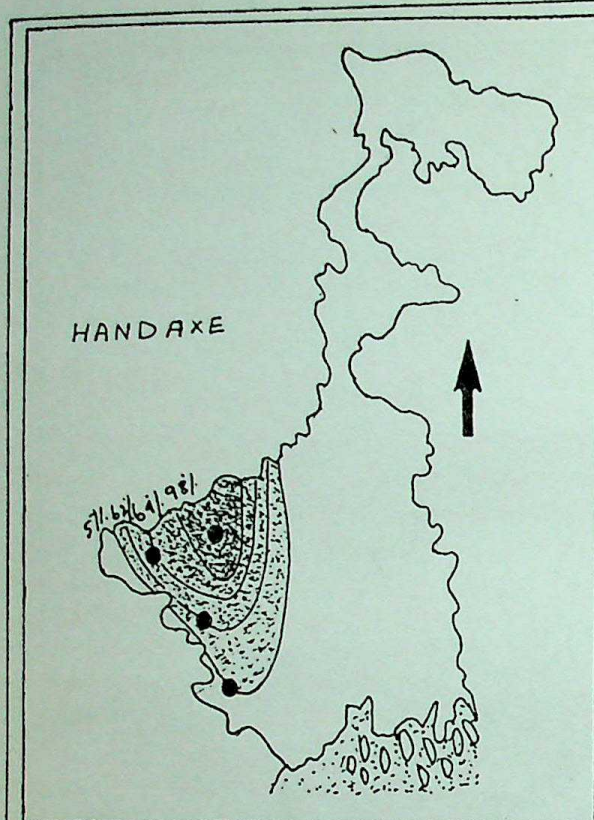
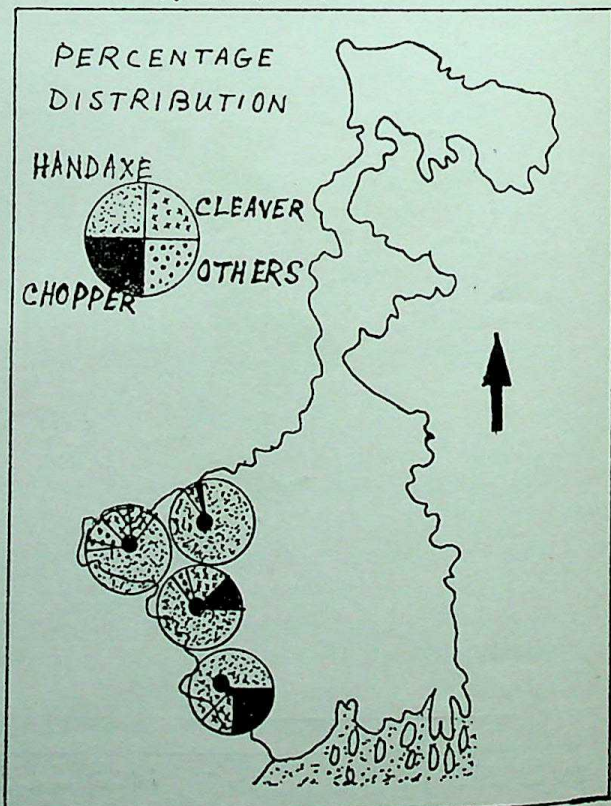
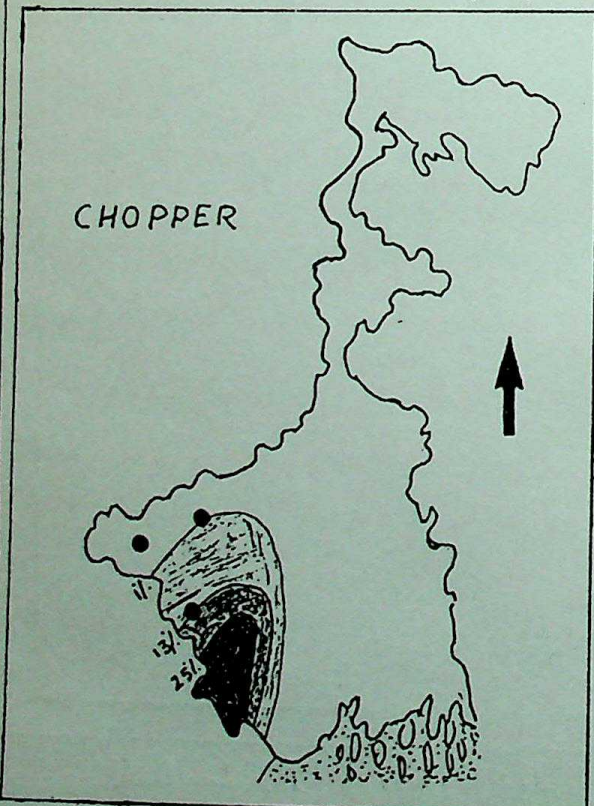


FIG NO 1: SHOWING THE DISTRIBUTION OF LOWER PALAEO LITHIC SITES.





FIGNO2: SHOWING THE PERCENTILE DISTRIBUTION.





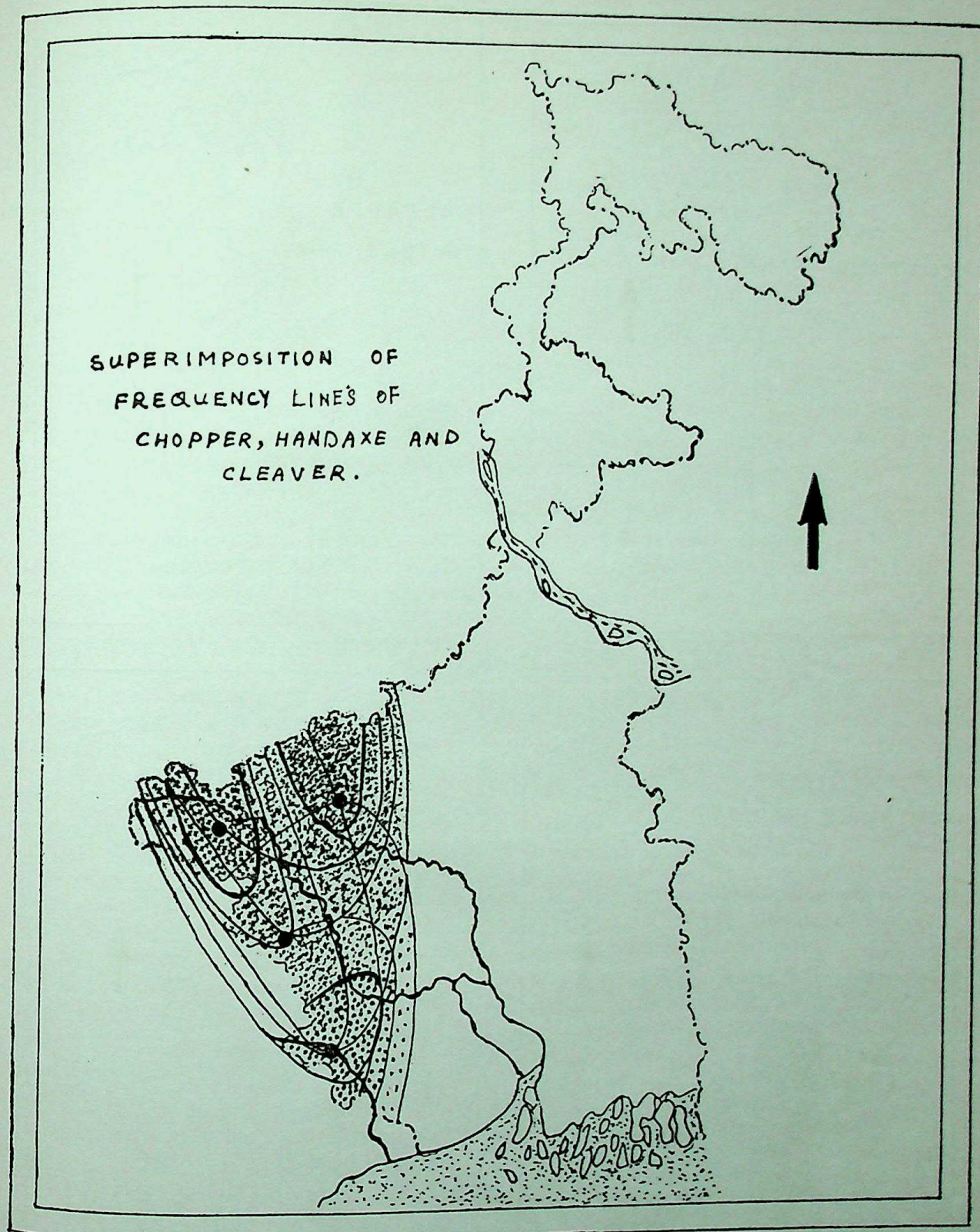
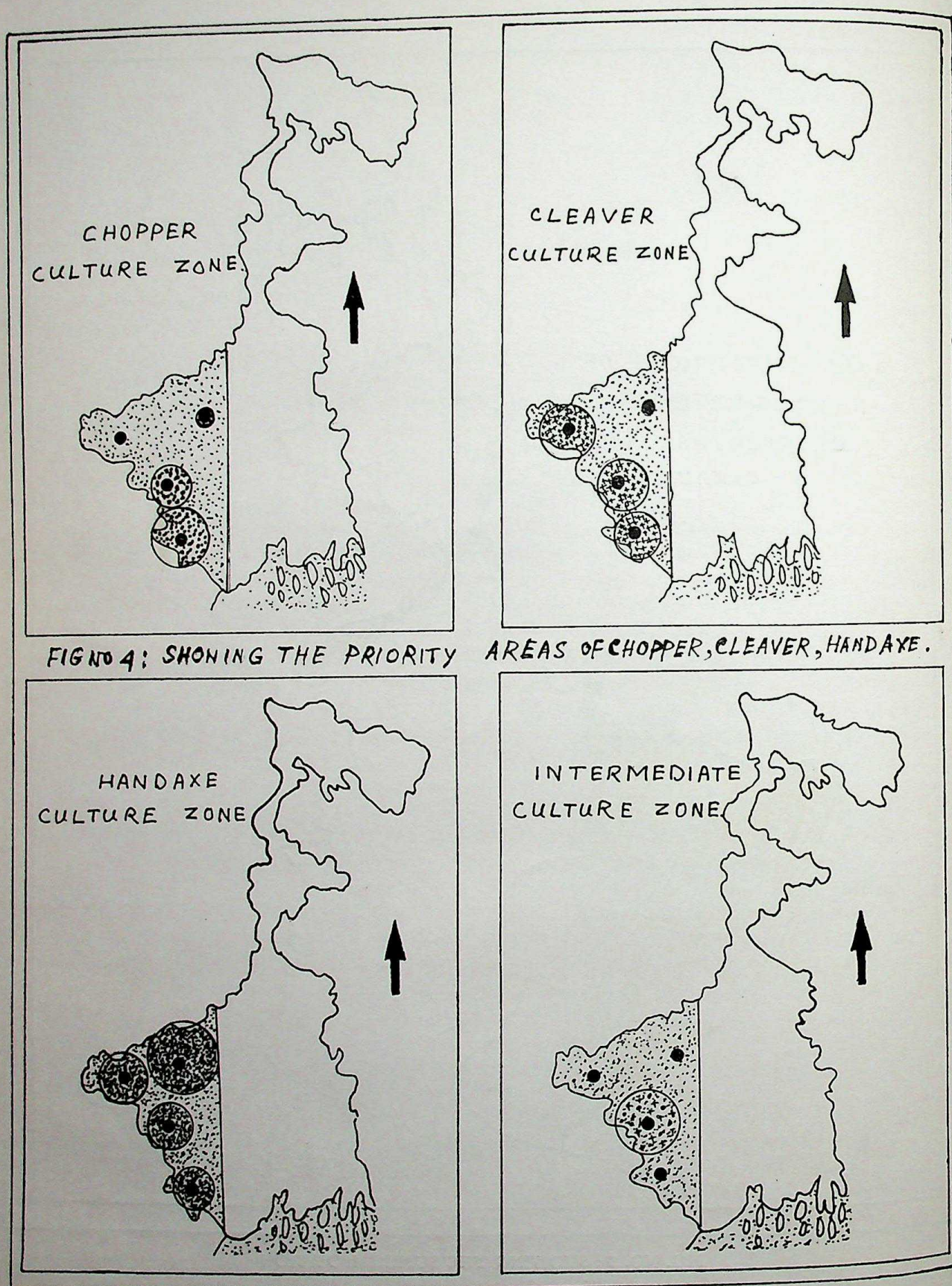


FIG. NO. 3 : SHOWING THE SUPERIMPOSITION







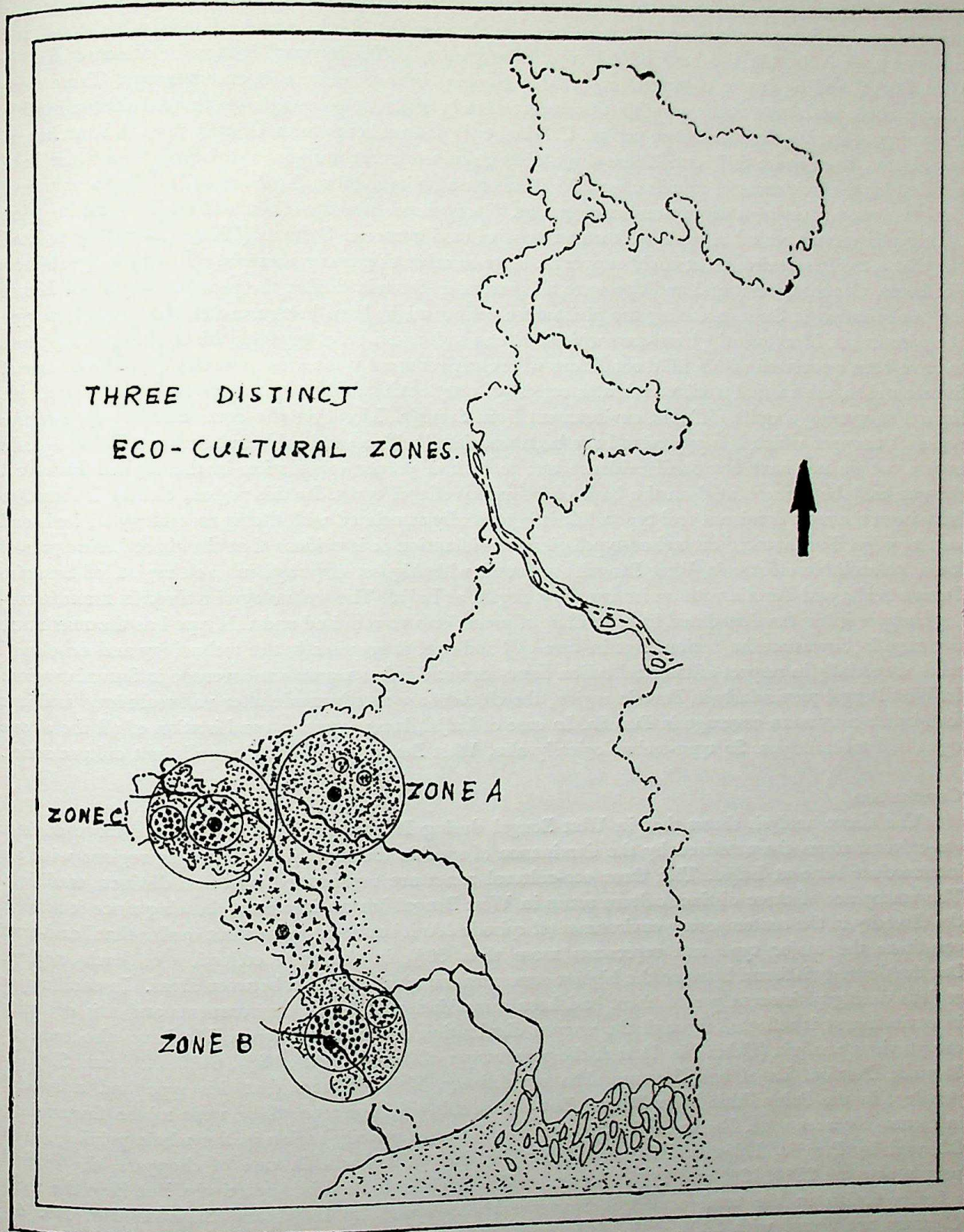


FIG. NO. 5 : SHOWING THE ECO-CULTURAL ZONES



between different types. It shows that the central part of the activity area has the maximum overlapping while Susunia, Suvarnarekha and Purulia are the three major focal areas of hand-axe, chopper and cleaver respectively. On the basis of this superimposition of different types, it may be assumed that in West Bengal during lower palaeolithic period there had been three distinct culture zones. These three culture zones had been made possible due to completely different type of environments that existed in these regions during the pleistocene period. Otherwise the cultural expression of early men in West Bengal would have been quite different. These three distinct culture zones as suggested above have further been justified by the evidences of faunistic remains from these regions. From Susunia region, we have animal fossil evidences covering a wider number of species. The presence of some of the animals in Susunia region during pleistocene period suggests a Savanna type of environments. Sarunas (1978) has rightly pointed out that a treeless environment could support a large number of grazing animals. The grazing animals like horse, elephant, oxen and antelope were all present in Susunia during the pleistocene period. Hence the environment in Susunia during the pleistocene period might have been more or less a savanna type of environment. Moreover the hand-axes which is the most dominant tool type of this region is supposed to have been associated with a mild conditions where environment was neither wet nor dry. But in case of Suvarnarekha the animal fossil vertebrates consist of only bovids and rodents (on the basis of available report) suggesting a quite different environment from Susunia. Moreover the dominant tool type of this region is chopper which is supposed to have been associated with a semi arid environment. From Purulia region, we do not have any fossil evidence due to lack of proper exploration in the region. However, the gap may be compensated on the basis of frequency of tool types. In this region, cleaver is found to have been the most dominant tool type while it is generally associated with the forest ecology for its broad cutting edge. Furthermore on techno-typological consideration it is evident that the three basic types of lower palaeolithic culture in West Bengal are found with highest coverage in each region of Susunia, Suvarnarekha and Purulia with an intermediate region at Laljal. The technology involved in manufacturing chopper is less developed and little amount of precession was required and this type has the maximum coverage in Suvarnarekha region. But in case of hand-axe, it requires better technology and developed method specially in respect of later acheulian hand-axes and it has maximum coverage in Susunia region. In West Bengal particularly in Purulia region, the cleavers are mostly made after vall technique and it is found with maximum coverage in Purulia. In case of Laljal, it represents a combination of all the above types and technologies. So typo-technologically also, West Bengal represent three distinct culture zones.

### Conclusion

The above analysis shows that in West Bengal during Pleistocene period there were three distinct eco-cultural zones characterized by the dominance of specific tool type in three major regions with an intermediate zone at Laljal. This three eco-cultural zones are represented by three distinct tradition. The emergence of three distinct culture zones in West Bengal has an important bearing since it reflects the diversity in the contemporary environmental episodes. As it has been pointed out earlier that hand-axes constitute the major type and represents more than 50% in the total collection of each region. But the diversity is found between the highest concentration area and the inbetween areas. In each major regions during pleistocene period there had been some kind of different environments and this diversity in environment is reflected through the uneven distribution of major tool types. We have also seen in the previous analysis (Table No. 1) that the percentages of hand-axes are 98%, 64%, 62% and 57% in Susunia, Purulia, Laljal and Suvarnarekha respectively. This indicates that this type had a special privilege in the Palaeolithic West Bengal. But within this privilege area, there were minor fluctuations in terms of percentages. For example, Susunia was the most priority region in the whole privilege area followed by Purulia, Laljal and Suvarnarekha (Fig. No. 4). Likewise in case of choppers, the overall percentages are 25%, 13% and 1% in Suvarnarekha, Laljal and Susunia respectively. But here the most priority region in the total area was Suvarnarekha followed by Laljal and Susunia (Fig. No. 4). Cleavers are found with 20%, 19%, 18% and 1% in Purulia, Laljal, Suvarnarekha and Susunia respectively. Here the priority region in the total area was Purulia followed by Laljal, Suvarna-



rekha and Susunia (Fig. No. 4). This analysis allows us to conclude that the priority regions of hand-axes, choppers and cleavers are Susunia, Suvarnarekha and Purulia while in case of Laljal it stands in the medial position in the priority regions. Hence it may be considered as an intermediate region between these extreme priority regions. Again this three culture zones may be termed as A,B,C zones. Further analysis shows that in the A zone (hand-axe priority area) the hand-axes cover the maximum area with 98% followed by choppers and cleavers with 1% each (Fig. No. 5). In B zone (chopper priority area) the choppers cover only 25%, but since it is the highest percentage coverage in West Bengal, this area is considered as chopper priority area. Within this chopper priority area, the other types like hand-axes and cleavers have 57% and 18% coverage (Fig. No. 5). Likewise in C zone (cleaver priority area) the total coverage of cleaver is only 20% and again since it is the highest percentage coverage in West Bengal, this area is considered as cleaver priority area while other types like hand-axes and others cover 64% and 16% respectively (Fig. No. 5). While in the intermediate zone of Laljal (intermediate area), the individual coverage of hand-axe, chopper, cleaver and other are 62%, 13%, 19% and 6% respectively (Fig. No. 5).

From the above analysis, we can sum up that the three culture zones as mentioned above are quite unique and differs from each other and this kind of variability within broad lower palaeolithic culture in West Bengal is mainly due to specific type of environment, geographical elements, surface geology etc. of the region concerned.

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## GUPTA COINS : THEIR SOCIAL BEARING

CHHANDA MUKHERJEE

COINS constitute an important source of information for ancient Indian history. The Imperial Gupta rulers have left a huge number of coins, mainly in gold, silver and copper. Of course, there are some recently found lead coins.<sup>1</sup> From a study of these coins we can arrive at some positive conclusion more or less regarding all aspects of contemporary life. As a matter of fact, these coins supplement and modify our knowledge of Gupta society in a greater extent as may be gleaned from inscriptions of the Imperial Guptas and the classical sanskrit literature, both religious and profane.

With regard to the state of society Gupta coinage in the first instance throws a flood of light on the religious belief of the monarchs as well as of the people in general. That the Gupta monarchs were great patrons of Vaishnavism, a fact known from other sources, is corroborated by the numismatic evidence. The legend signifying Vaiṣṇava faith like *Paramabhāgavata*, depiction of the figure of lord Viṣṇu<sup>2</sup>, his sacred mount (*vāhana*) Garuḍa and also the *Chakradhvaja* symbol are seen on the Gupta coins. At the same time the Gupta kings depicted on their coins many deities of other Brahmanical sects. Evidently, the Gupta monarchs were ardent followers of Vaishnavism. Nevertheless they showed great liberalism with regard to other Brahmanical sect as evinced from the depiction of Goddess on Lion<sup>3</sup>, Gaṅgā<sup>4</sup>, Kārttikeya<sup>5</sup> etc. on their coins.

Again, some of the coin types of the Gupta rulers also reveal that Vedic sacrifices and rites were prevalent in the contemporary society. On the Aśvamedha type of coins of both Samudragupta and Kumāragupta I we see the depiction of a sacrificial horse. The Aśvamedha type coins of Samudragupta marked the culmination of his extensive conquests both in North and South India as stated in his Allahabad pillar inscription.

The Chandragupta—Kumāradevī type coin<sup>6</sup> enlightens us about some contemporary social customs. On the obverse of this coin type we see the king as offering a ring to his wife. Whether offering of the ring was just a souvenir or formed part of the marriage ritual will always remain a moot question, but it may be safely asserted that the custom of offering ring by the bridegroom to his bride which is generally held as European in origin, was not unknown in ancient India, as evidenced in Indian literature and coins.

Further, from the Gupta coinage we get a very vivid idea of contemporary life-style. On the coinage the kings have been depicted wearing short *dhoti*, pants, either full or half, coats, jackets etc. The deities and the other female figures are seen as wearing *sāḍī* and tight bodice. If it is remembered that sartorial fashions and manners of the royalty are generally imitated not only by the nobility but by commonalty as well, we may conclude that the dresses and costumes as described above were popular with the common people. Again, both men and women were adorned with necklace, armlets, bangles, ear-rings etc. Also



on some coins the deities have been depicted with *chandrahāra*<sup>7</sup> around their waist line. Household articles like wickerstool<sup>8</sup>, couch<sup>9</sup> also have been depicted on coins.

Thus, from the above discussion we may conclude that the Gupta coins shed a welcome light on the high degree of excellence attained in metallurgy, smithy and jeweller's art, woodcrafts and textile industry. The Gupta coins themselves are tangible proof of the highly developed metal industry. On the other hand, Gupta coins enlighten us about the existence of people of different vocations *viz.*, artists, goldsmiths, weavers, carpenters etc. in the contemporary society.

From coinage we get some glimpses of royal sports and pastimes. We often find them as hunting tiger<sup>10</sup>, lion<sup>11</sup> and rhinoceros<sup>12</sup>. It is also very likely that the elite class of the society took to hunting to spend their leisure. Again, the Lyrist type coins of both Samudragupta and Kumāragupta I give us some idea of entertainment through music, besides illustrating a string instrument in popular use in the age.

From Gupta coins we get some idea of the contemporary literary attainment also. We know that the Gupta inscriptions are good specimens of the highly developed ornate literary art. The coin legends also testify to the same fact. The metrical coin legends undoubtedly throw light on the talent, reason and thinking of the Gupta court poets.

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- <sup>3</sup>The Chandragupta Kumāradevi types of Chandragupta I and Lion-slayer types of Chandragupta II, Allan, J., *Catalogue of the Coins of the Gupta Dynasties and of Śaśāṅka, king of Gauḍa*, pl. III, 1-15, *ibid.*, pl. VIII, 11-17.
- <sup>4</sup>Tiger types of Samudragupta, *ibid.*, pl. II, 14-15.
- <sup>5</sup>The Kārtikeya types of Kumāragupta I, Altekar, A. S., *The Coinage of the Gupta Empire*, pl. XIII, 11-14.
- <sup>6</sup>*Ibid.*, pl. I, 8-13.
- <sup>7</sup>The couch type of Chandragupta II, *ibid.*, pl. IX, 5.
- <sup>8</sup>Horse man types of Chandragupta II, *ibid.*, pl. VII, 11-15 and pl. XI, 1-13.
- <sup>9</sup>Couch types of Chandragupta II, *ibid.*, pl. IX, 1-5.
- <sup>10</sup>Tiger-slayer types of Samudragupta and Kumāragupta I, *ibid.*, pl. III, 13-14 and pl. XII, 11-13.
- <sup>11</sup>Lion-slayer types of Chandragupta II and Kumāragupta I, *ibid.*, pl. VI, 1-15 and pl. XII, 1-10.
- <sup>12</sup>Rhinoceros-slayer types of Kumāragupta I, *ibid.*, pl. XIII, 3-6.



## RE-ASSESSMENT OF A SCULPTURE SHOWING BUDDHA'S LIFE SCENES

ANASUA SENGUPTA

THE Indian Museum, Calcutta, has in its collection an interesting architectural fragment (Reg. No. S60/A24175), highly stylized and offering some unusual features. Broken in three parts (one portion being lost) it, most probably, formed part of an architrave (Fig. 1). The whole panel represents three small niches fashioned in the form of a shrine topped by five-tiered pyramidal roofs, having a *chaitya* window motif in the front. The upper edge of this fragment consists of a row of diminutive human figures carrying garlands. Two miniature *stūpas* are depicted just below these garland bearers. There are two highly stylized beaded creepers issuing out of *makaramukhas*, serving the purpose of a border to give special effect to the central portion of the fragment. On either side of the fragment there stands a female *chowry*-bearer.

In the shrine to the right (Fig. 2) there is a standing figure of the Buddha draped in a transparent robe that covers the left shoulder only, the figure holds the edge of it by his left hand. The right hand is broken from the elbow, but from the remaining portion it appears that it might have been in the *varada mudrā*. To the right of this figure a woman is found kneeling at her feet while a pot-bellied human figure is standing behind her. It appears to hold a flask-like object by the left hand, while there is a suggestion of a beard on its mutilated face. A celestial figure occupies each of the upper corners, the one to the proper right, however, appears to be four-armed. To the left of the Buddha is a human figure holding the umbrella over the head of the Master. Another small figure, possibly in *añjali mudrā* is standing in front of the umbrella-bearer. If the flask-bearing, pot-bellied figure is to be identified as Brahmā the umbrella-bearer as Indra and the kneeling lady as the nun Utpalavarṇā then the scene may be taken to represent the Buddha's descent from the Trayatrimśa heaven<sup>1</sup>.

In the shrine to the left (Fig. 3) we find another standing figure of a defaced Buddha being attended by two human figures on his right, each holding a staff-like object. To the left of the central figure two elephants are represented one above the other. The lower one is in the kneeling position, while the upper one gets the blessings of the Master. A curious feature is to be found on the upper corner of this side. Here five lions are depicted, one above the other, in the act of jumping. If the scene represented the taming of Nālagiri, the appearance of the jumping lions is a somewhat unusual feature.

The central shrine (Fig. 4) no doubt represents the Mahāparinirvāṇa episode. Here the Buddha is found lying on his death-bed. Three mourners are shown between the legs of the bed and supporting it. Two male and two female mourners are behind the bed. There is a tree in each upper corner with a *stūpa* in the centre. On either side of the pillared shrine there is a mourner in the garb of Buddha.

The most interesting feature of this elaborately carved fragment is to be found in the three rows of sculptures just below the central shrine (fig. 5). Interestingly almost all the hierarchical gods of the Brahmanical pantheon are depicted in these three rows, riding on their individual mount and with respective



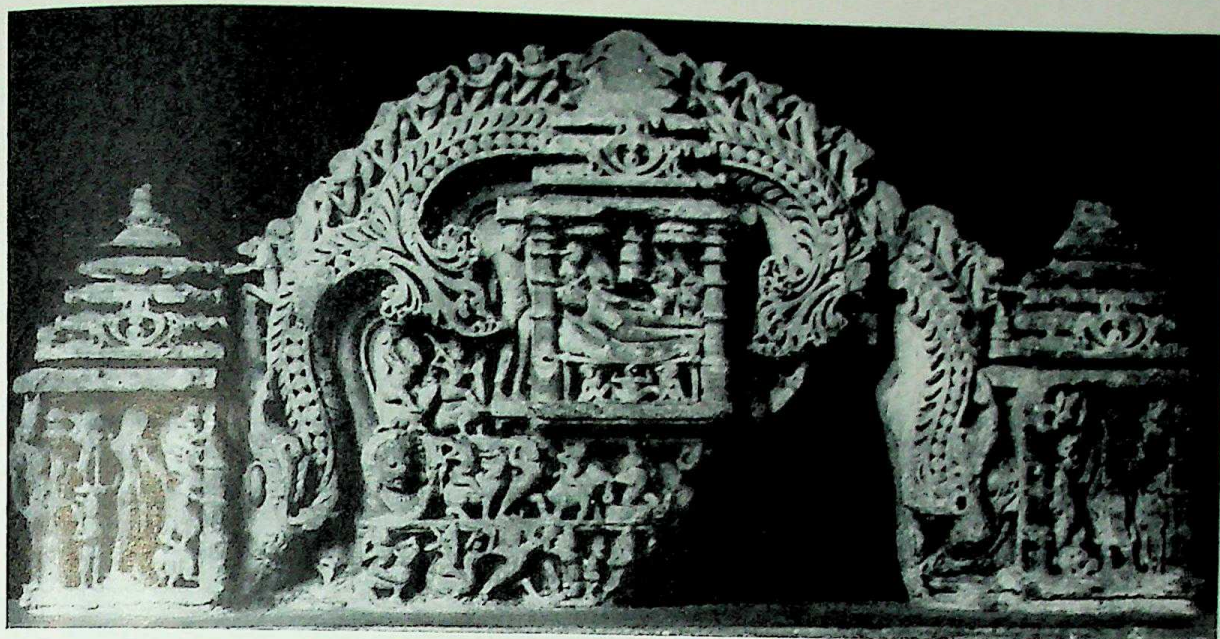
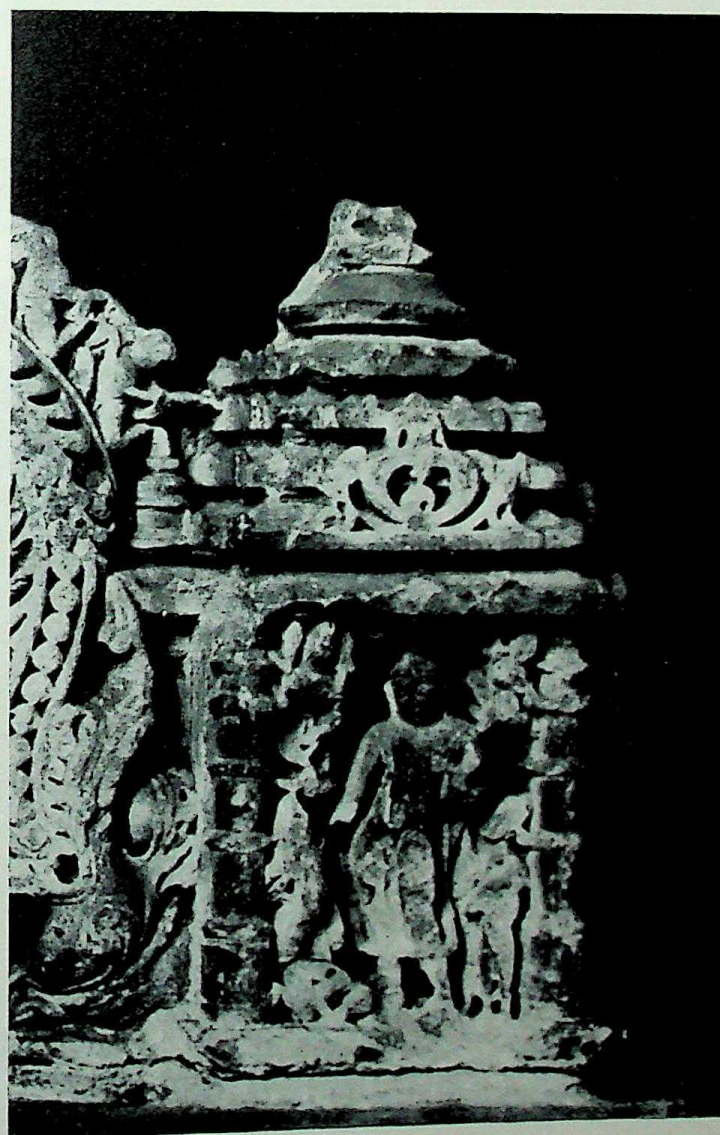


Fig. 1





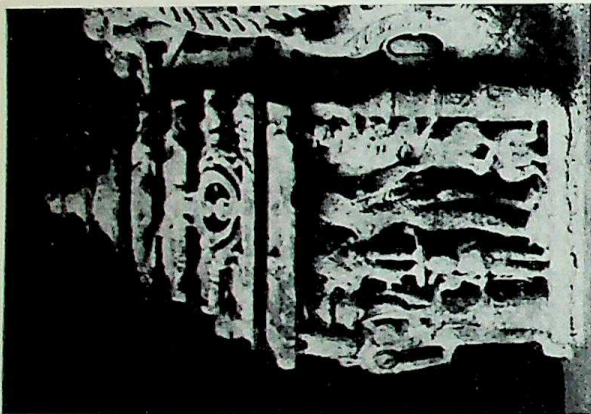


Fig. 3

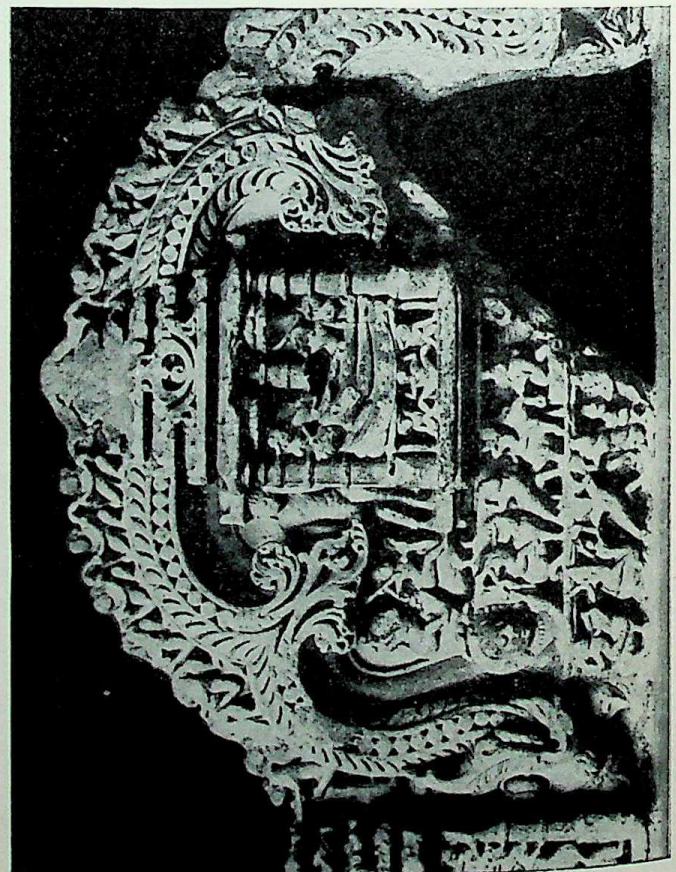


Fig. 4

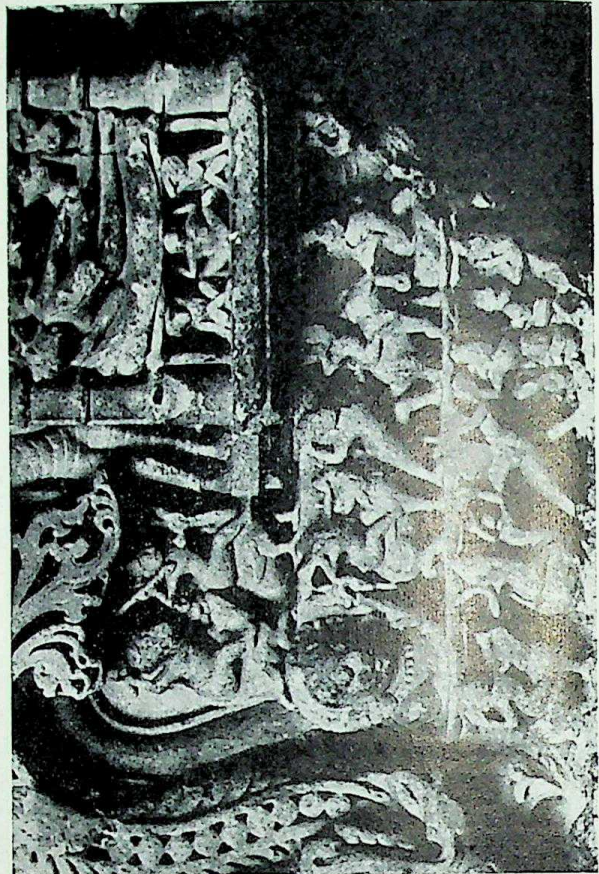


Fig. 5



attributes. The upper row consists of Kārttikeya on his peacock and Gaṇeśa on what looks like a mouse. The figures are in a much decayed condition but it is not impossible to identify Sūrya holding lotuses by his two hands, Indra on *airāvata*, Śiva on *nandī* along with Rāhu in the middle row, while Viṣṇu on Garuḍa, Brahmā on his *haṁsa* and Yama on his buffalo can be seen in the lower-most section. A female figure in *pratyālidha* and in the act of carrying something on her head stands between Viṣṇu and Brahmā. Though these figures are shown outside the central niche, but they are depicted in such a manner as if they are rushing towards the site of the Buddha's attainment of *parinirvāṇa*.

The sculpture concerned offers us some striking features. Viewed from the architectural point (*i.e.* from the tiered super-structure of the shrines) the fragment may be dated to about tenth/eleventh century A.D. Stylistically, however, it presents some interesting features. Firstly, a closer look on the Buddha figures within the miniature shrines would make it clear that it wears an almost transparent drapery with only a single line indicating its edge covering the left shoulder. The head is completely shaven with *uṣṇīṣa* at the top. The eyes are somewhat open. But the mourners in the garb of the Buddha just outside the central shrine have knotted curls on their head, characteristic of the Sarnath school of sculpture. The folds of their garments are indicated by deep incised lines. Secondly, the figures, excepting the two mourners outside the central shrine appear to be somewhat stunted, lacking the refined modelling of the Sarnath school. In fact the characteristic features presented by this sculpture may be taken to be the products of a transitional phase in the artistic activity of Sarnath from the classical to the mediaeval age. Moreover, the very material (*i.e.*, grey sandstone) in which the sculpture is made of, is not very common with the Sarnath artists, although it has been reported to be discovered by General Cunningham from the 'Chapel monastery' at Sarnath.<sup>2</sup>

Iconographically, however, the sculpture appears to be more interesting since it depicts most of the gods of the Brahmanical pantheon to offer their homage to the departed soul of the Master. In fact, in the *Mahāparinirvāṇa Sūtra* there is no reference to the coming of these gods on the death of the Buddha. The names of Brahmā and Śakra, however, are found, who are described in it only as lamenting his death.<sup>3</sup> It may be mentioned that these two gods have often been referred to in the Buddhist literatures from the very early time. We know that it was Brahmā on whose request Gautama agreed to propagate his doctrine for the first time.<sup>4</sup> Śakra or Indra has been referred to in the episode of his birth or even on his descent from the Trayatṛiṃsa heaven. But this sculpture from Sarnath is unique by itself because of the fact that no sculptural representation has so far been found depicting the scene of *mahāparinirvāṇa* in association with Śiva, Viṣṇu, Sūrya, Kārttikeya, Gaṇapati, Brahmā even with Rāhu and Yama. In the later Buddhist texts, the Brahmanical gods are generally found either to be trampled by the Buddhist divinities or in the act of fleeing away at the sight of their rivals.<sup>5</sup> Was it then a fact that this religious animosity gave rise to the peculiarity of the sculpture under observation? Another point of peculiarity is noticeable in the posture of the Brahmanical gods. They are mostly depicted as rejoicing or in the act of fighting, waving their weapons. Could it then be conjectured that the gods are happily accepting the departed soul of the Buddha in heaven? We have the reference that in his life time the Buddha went to the Trayatṛiṃsa heaven to preach his doctrine among the gods. Therefore, it is not unlikely that the gods would have been very happy to have him among themselves.

#### NOTES

<sup>1</sup> *Divyāvadāna*, pp. 384, 401.

<sup>2</sup> Cunningham, *A. S. Report*, Vol. I, 1861, p. 121; Anderson, J., *Catalogue and handbook of the Archaeological Collection in the Indian Museum*, pt. II, p. 29.

<sup>3</sup> Chapter VI, 15-16, *The Sacred Books of the East*, ed. Max Müller, Vol. XI.

<sup>4</sup> *Majjhima Nikāya*, I, 167ff.

<sup>5</sup> Cf. *Sādhana*, Nos. 262 and 204 in the *Sādhanamālā* describing the forms of Trailokyavijaya and Aparājita respectively.



# A REPORT ON THE CONSERVATION TREATMENT OF BHARHUT SCULPTURE

R. K. MUKHOPADHYAY  
A. B. MITRA

## Introduction

ON the southern part of the entrance of the Indian Museum, Calcutta, the greatest and priceless collection of India as well as Asia, Bharhut Gallery (1st and 2nd early B.C.) was set up more than hundred years ago which welcomes and leads the visitor to the rich treasure of museum. "The magnificent stupa regarded as a single piece of exhibit was recovered by the renowned archaeologist Cunningham in 1875 from Nagod Tahsil of Satna district in Madhya Pradesh. Its railings are about nine feet high in wooden architectural style and consists of pillars cross bars and a massive scoping. It had four gateways at the four cardinal direction of which the eastern, about twenty three feet high, has survived.

Bharhut stupa made of red sandstone is considered as monument for glorification of Buddhism depicting the scenes of Buddha pre-birth and last-birth floral and arrival motifs besides yakshas and yakshis and *devatas*. Many of the scenes have short levels in Brahmi character of the 2nd century B.C., which often mention the donor. On a gateway pillar is an inscription recordings its erection in the reign of the Sunghas."<sup>1</sup>

Recently a major conservation work for refurbishing Bharhut sculpture, "which consist of one (torana) gateway, twenty nine pillars (intact) fragment of twentyone more pillars, sixty six cross bars and thirtytwo pieces of coping of the ground balustrade of the stupa,"<sup>2</sup> was undertaken by the conservation laboratory of the Indian Museum. In this article a report on the conservation treatment of the Bharhut Gallery has been briefly described.

## Nature of stone

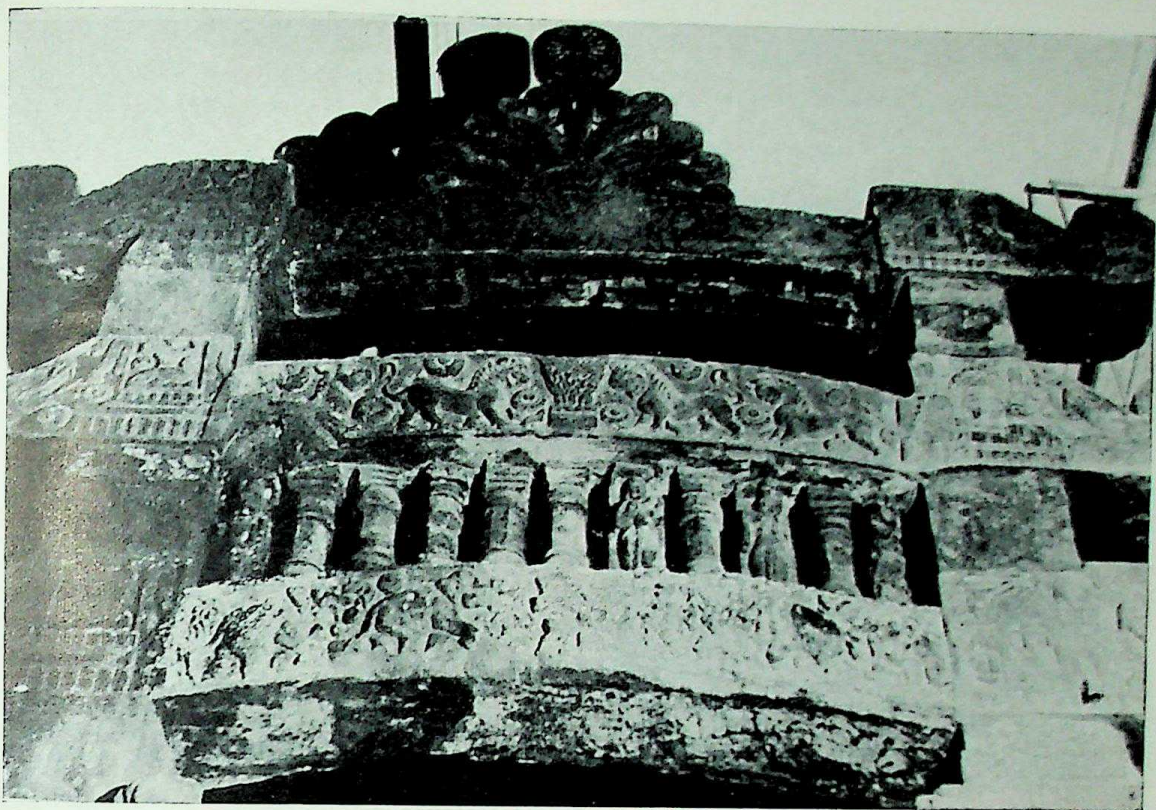
Bharhut sculptures which are made of red or buff coloured sandstone, known as Vindhyan sandstone specially of the Bhandar series. This special type of stone was used as building stone because of their regular bedding, uniform grain, pleasing colours, easy workability and durability.

Sandstones are generally composed chiefly of quartz granules of fragmental texture and with various interstitial cementing materials. Different types of sandstones (*e.g.*, Calcareous, argillaceous, siliceous, ferruginous) are produced depending upon the nature of binding medium *e.g.*, silica, iron-oxides, calcite or clay. From the appearance of the sculpture in the Bharhut Gallery there are sufficient reasons to believe that the statues might have been built from the ferruginous sandstone. Deterioration/decay of sandstone is often related with the physical characteristics, as well as minerological and petrographic composition of each element. Beside fluctuation of temperature, variation of relative humidity, absorption of water and size of the pores of the stone are also responsible for deterioration of stone sculpture.

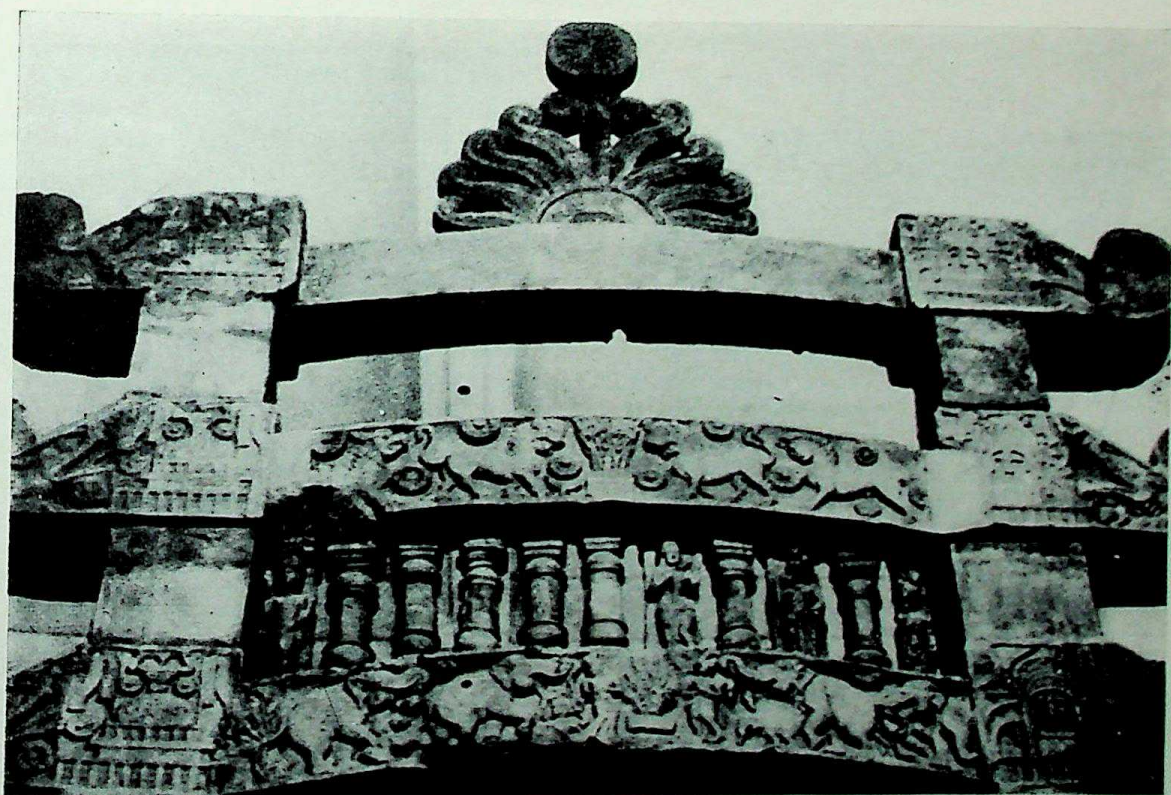
## Deterioration

The position of the gallery being by the side of the main road, damaging effect of the dust, dirt (as airborne material), soot (tarry matter), humidity and acidic oxides present in the surrounding atmosphere



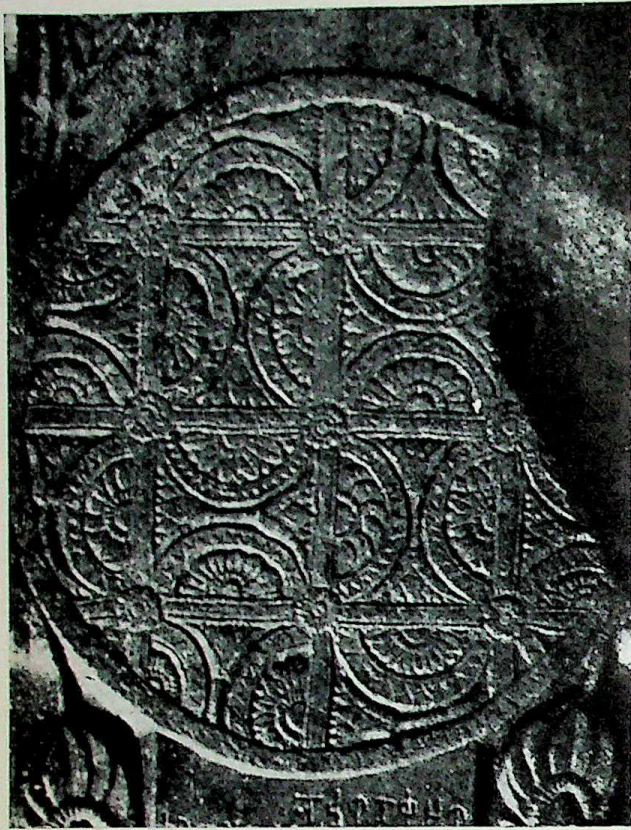


Torana (Before treatment)

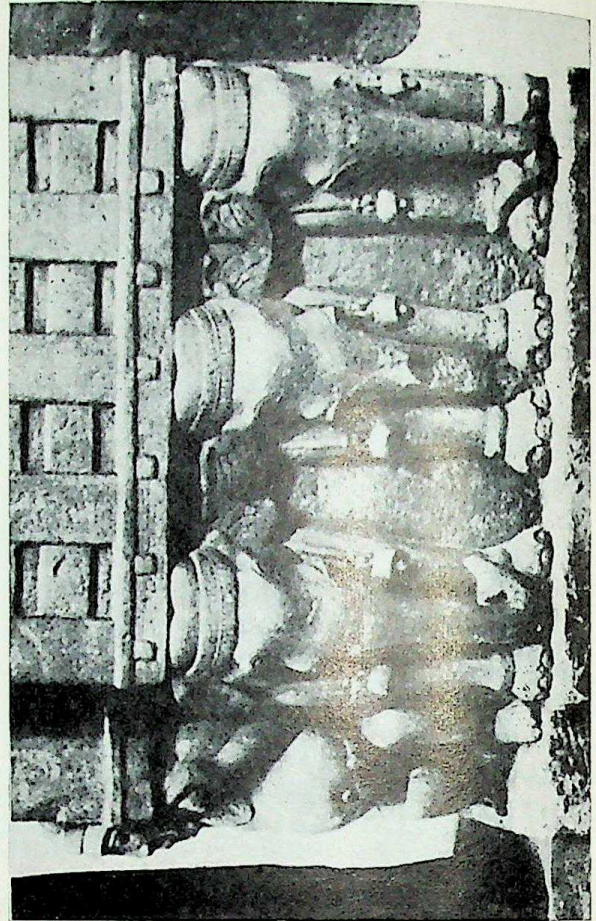


Torana (After treatment & restoration)





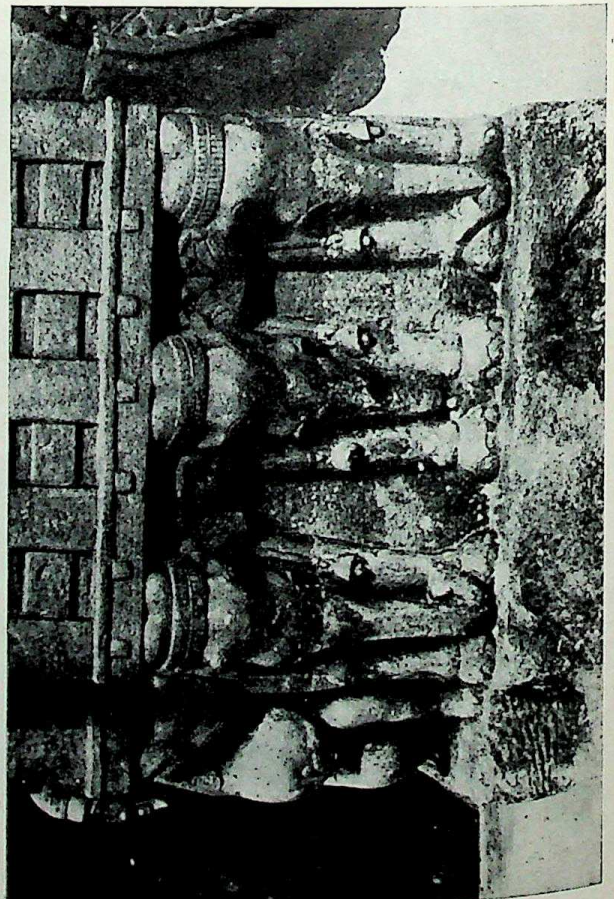
Chakra (After treatment)



Bottom portion of a pillar (After treatment)



Chakra (Before treatment)



Bottom portion of a pillar (Before treatment)



in the gallery often require cleaning and preservation treatment. In the recent years with the taking up of the Metro-Rail in the Chowringhee area accumulation of dust in the gallery posed a great problem. An attempt was made for determining the amount of dust/dirt particles on the pillars of the Bharhut Gallery. The result is given below:

- 1.2-1.4 mgm/100 sq. cm. per day when the gallery is closed for whole day.  
1.6-2.0 mgm/100 sq. cm. per day at the time of opening the gallery.

Almost all the bottom portions of the pillars, which were badly affected with the cemented particles due to mosaic work, requires treatment for removal of such type of foreign particles. A few pillars were either found to be affected with soluble salts from the ground or due to surface effervescence and spontaneous decay of stone itself. Besides some black oil stains (caused by human vandalism), calcareous deposits and flaking, of a few stone sculptures were also noticed.

Problems of pigeon excreta/droppings caused a great problem too. A few plaster-cast were also requiring some sort of restoration work.

### Preservation

Washing of the salt affected pillars was done by soft-dusting followed by cleaning with de-ionised water with success and surface efflorescence on a few sculptures was tackled by simple brushing in dried condition. For the purpose of extraction of soluble salts from a few salt affected pillars, moist paper-pulp application was done, which gave satisfactory result. Estimation of extracted salt was made possible from one pillar (No. 47, 48, 49). The result is given below:

No. of application	Soluble salt as Sodium chloride extracted by one square ft. of paper pulp of good quality of 1/2 inch thickness (gm.)
1.	0.6234
2.	0.5013
3.	0.5013
4.	0.2203
5.	0.2100

Pillars affected with cemented particles as well as pigeons droppings were treated mechanically simply by adopting technique like picking, scraping and brushing carefully and the oil stains were removed locally by applying chlorinated solvent *e.g.*, dichloroethane, trichloroethylene and organic solvent *e.g.*, toluene.

Calcareous deposit was found on a good number of pillars. Mention may be made of one chakras (No. 150) on which deposits totally obscured the artistic work. Preservation measure was undertaken to remove the calcareous deposit from almost all the affected portions of the sculpture by applying clay-pack method where the deposits were kept moistured with softener mixture (6 parts water + 3 parts trichloroethylene + 2 parts petroleum ether and 1 part nonionic detergent like teepol) and ultimately the deposits were removed mechanically by skilled hand. A few cracks/flaking as was noticed on particular spots of stone sculptures, were consolidated by injecting with 25 per cent. Poly Vinyl Acetate solution in toluene.

A few photographs of conservation work done on stone at the Bharhut Gallery, are shown which depict the condition of the object before and after treatment.

### Discussion

Stone decay very often starts immediately after the formation of an artifact as stone is vulnerable to the degrading affect of an unfavourable environment and always call for careful and effective conser-



vation measures for their satisfactory preservation, maintenance and display. The first stage for conservation treatment of stone should be a correct diagnosis to ascertain the disease either by testing visually or by applying certain classical analytical methods. The most significant disease like surface efflorescence, salt hydration and salt crystallisation have great disruptive effect on stone objects. In a humid climate water finds many access through different joints of stone objects (by capillary action) which weaken the cementing medium of sandstone. Presence of salts in water sometime give rise to a complex type of reactions inside the stone. In the tropical climate like ours alternate expansion and contraction of moisture (as water vapour) particularly in porous sandstone increase the internal pressure of the stone object which leads to flaking, cleavage, cracking and brushing of the same. Acidic oxides soluble in water also has a degenerating effect on the stone. As the indoor exhibit, Bharhut sculpture has to face less problem than the other open air sculptures. Almost all the sculptures in the Bharhut Gallery are in good condition where flaking, surface efflorescence and other possible damaging effects are not so much pronounced.

### Conclusion

The ideal methods of protecting the stone object is to prevent or control the different deteriorating agencies and disintegrating factors by applying appropriate methods. Periodic inspection and observation of almost all the stone sculptures are often considered necessary to timely detect the causes of deterioration. As the environmental pollution/condition is changing very fast with the growth of new industries in different regions of the country, it is now high time to find out new techniques, materials and methods of preservation for protecting the cultural heritage.

### NOTES

<sup>1</sup> Sharma, P., A facelift for Buddhist relics—*Telegraph* (Newspaper), Calcutta, 12.12.83.

<sup>2</sup> Ghosh, A., *Remains of Bharhut Stupa in Indian Museum*, Part I, 1978.

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## A NOTE ON SOME INTERESTING ICONS FROM NALANDA

PARTHA PRATIM BOSE

**I**N the Nalanda Site Museum some interesting Brahmanical images are noticed. The images\* are found to reveal some special characteristics. The accession field register of the Archaeological Survey of India dates some of the images between the 9th and the 12th cent. A.D. Besides this, their stylistic features, provenance, and several other considerations may indicate that most of the images are datable to the early mediaeval period.

Until now forty to fifty images of this kind (few are broken) are found at Nalanda. Most of them are small in size, portable and crudely carved on solid small stone slabs (Figs. 1, 2). In some cases the stone slab is carved like a round halo at the back of some of the images. Some of the slabs are often very simply decorated (Figs. 3, 4). Here it is important to note that the simply decorated back slabs of the images are by no means comparable with the highly ornamented and decorated stela of the Pāla-Sena School, which is the characteristic feature of the Pāla-Sena School of Art.

Both the male and female figures of the deities are often well-formed. However, the contours are not always prominently shown and the general treatment is also coarse and flattened to a great extent (Figs. 1, 2, 3, 4). They lack the soft gracefulness and plasticity of the images belonging to the Pāla-Sena School of Art. The eyes are open often bulging, eye-brows are raised. Lips are turned outward (Figs. 1, 2, 3, 4, 5). The male as well as female figures are often adorned with the simple ornaments like necklace, bangles, armlets, waist belts etc. (Fig. 5). The garment in the lower portion is usually given a separate volume (Figs. 1-6). The treatment of drapery of some of the images reveals the poor and unskilled imitation of Pāla-mannerism (Figs. 1-4 & 6).

The head-dress and the treatment of hair of both the male and female deities of this group are also peculiar and different from the main trend of the sculptural style of Eastern India of the early mediaeval period. Both male and female images are adorned with turban like caps and in the case of female deities two locks of hair are usually wrapped on the shoulder behind the ear (Figs. 1-4).

Most of the figures, either seated or standing, are shown on simple pedestals. In a few cases traces of lotus petal in a crude form are also noticed (Figs. 1-4 & 6).

The images are unsophisticated and rather crude in appearance. Even the fingers of hands and legs are not always distinct. The attributes in the hands of most of the deities are not clear (Figs. 1-6). Stylistically, their crude physiognomical details are in direct contrast to the soft benign and calm facial expressions of the figures produced by the Pāla-Sena School of Art.

\*While I was going through the Photographic archives of Archaeological Survey of India (Museum Branch) in Calcutta I noticed those interesting icons.



The ornaments on Pāla-Sena images are chiselled with utmost care and precision. This sense of preciseness is hardly found in the figures under review, though many of them are adorned with simple ornaments.

Another significant point is that among the images in question there is a preponderance of Brahmanical deities. A large number of female deities of Mahiṣāsūramardīnī, Pārvatī, Chāṇḍī, or probably Umā and Chāmūṇḍā are found. Among the male deities the images of Viṣṇu, Gaṇeśa and Kārtikeya are noticed.

From what we have discussed above it appears that the sculptures or icons under review may be products of the Pāla-Sena period but they bear least affinity or similarity with the sculptural specimens of the recognized Pāla-Sena School of Art. Now a most debatable and controversial question comes to our mind, whether in a particular period and zone the simultaneous existence of a traditionally acknowledged school of art and another lesser important local school or idiom is possible? On this a well known art critic, F.M. Asher observes "I cannot think of any instance in the history of Ancient Indian Art which gives certain evidence of a popular trend followed closely paralleling a great tradition."<sup>1</sup> But the subsequent discoveries and researches in the field of ancient Indian sculptural art go against this observation. A well-known leading Indologist, Prof. B. N. Mukherjee is the first to show that two or more schools or idioms could have flourished along with the acknowledged Pāla-Sena School of Art during the early mediaeval period in Eastern India<sup>2</sup>. The images discussed by Prof. Mukherjee are found from a wider region of Eastern Region comprising Assam, Bihar, West Bengal including some parts of modern Bangladesh, covering almost all areas ruled by the Pāla Empire<sup>3</sup>. But the present images are concentrated mainly at Nalanda. The images studied by Prof. Mukherjee has shown some similarities like well formed contours with the traditional Pāla-School of Art<sup>4</sup>. Incidentally, so far the treatment of the drapery is concerned some of the images, under review, to show the crude imitation of Pāla mannerism (Figs. 1-4 & 6).

The only difference of the present images with that of discussed by Prof. B. N. Mukherjee is while the later images are made of bronzes the former are represented in sand stone. Thus it is apparent that in representation the stone images are much more cruder and folkish than the images made of bronze. Another point of difference is while most of the bronze images are belonging to the Buddhist Pantheon, the images, in question, made of stone are representing mostly the Brahmanical deities. Here lies the importance of the present images. Regarding the sculptors or artists of the images in question it can be assumed that their activities continued simultaneously with those of the well-acknowledged Pāla-Sena School of Art.<sup>5</sup>

From where and when this particular style of sculpture developed and flourished in some parts of Eastern India cannot be explained at the present stage of our knowledge. Probably the group of sculptors were patronised by the local common people and hence the influence of folk art tradition or a regional idiom can be noticed in the sculptures under review. Moreover, it is almost clear that the basic differences between the images in question and specimens of the acknowledged Pāla-Sena School of Art lie chiefly in their ideas of and approach to plastic art, particularly the art of creating human figure.

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- <sup>1</sup> F. M. Asher, *Vikramasīla Mahavihara*, Bangladesh Lalitakala, 1975, Vol. I, No. 2, P. 112.
- <sup>2</sup> B. N. Mukherjee, *East Indian Art Style*, 1980, pp. 5-13.
- <sup>3</sup> *Ibid.*, 1-13, 18-33.
- <sup>4</sup> S. K. Mitra, (Edited) *East Indian Bronzes*, (Calcutta, 1979), pp. 46-55.
- <sup>5</sup> Recently Dr. Debala Mitra in her Book *Bronzes from Bangladesh* also referred to the existence of a separate art school (Chittagang School of Art) contemporary to Pāla-Sena School of Art, same as that noticed by Prof. B. N. Mukherjee., pp. 2, 3, 8.





Fig. 1



Fig. 2

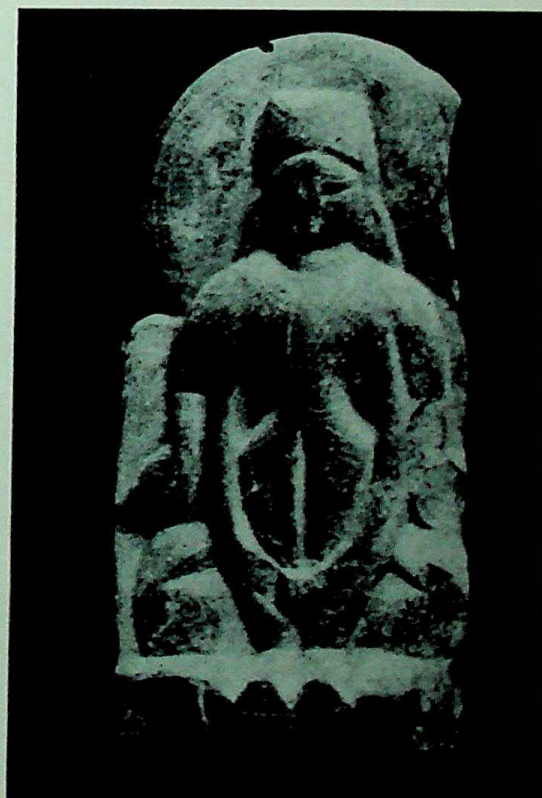


Fig. 3

Human figures (Nalanda)



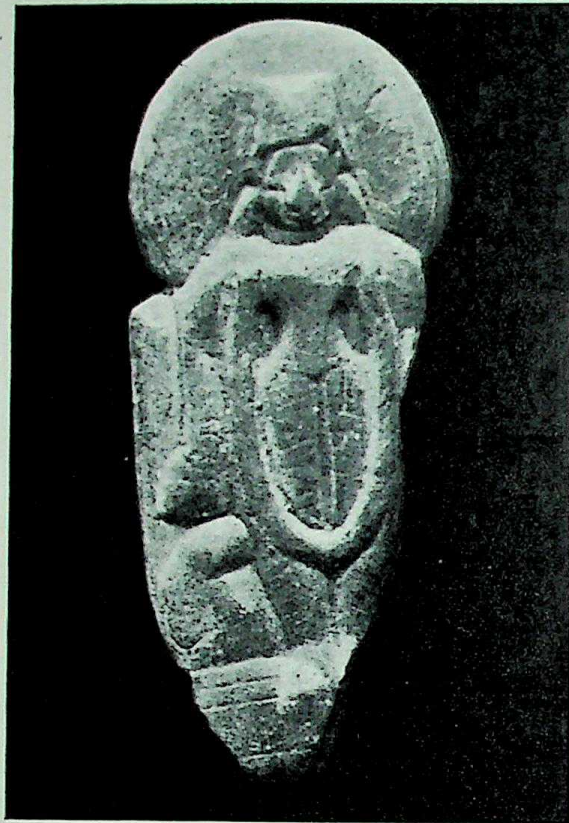


Fig. 4



Fig. 5

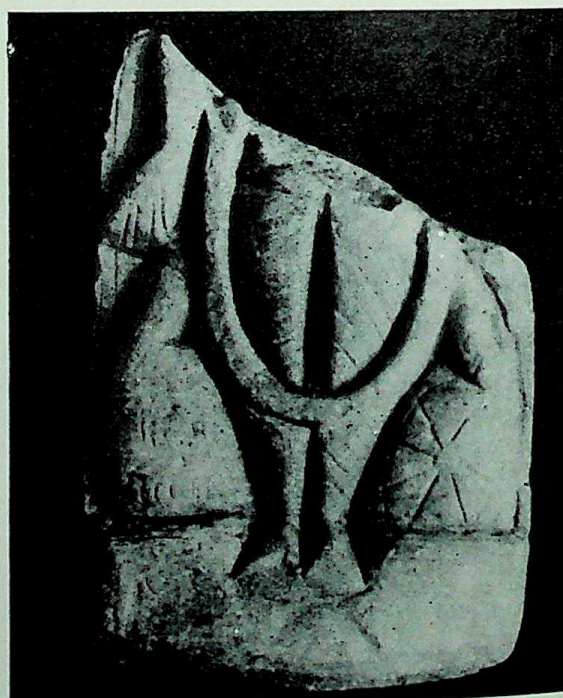
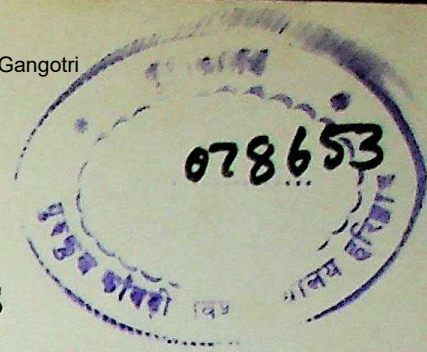


Fig. 6

Human figures (Nalanda)





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